Architecture

REMARKS

ON THE

ARCHITECTURE

OF

THE MIDDLE AGES,

ESPECIALLY OF ITALY.

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PREFACE.

THE original observations from which the following pages have been compiled, were made during a rapid tour through France, Italy, and part of Germany, in 1832-3. Two things particularly attracted my attention during the journey—the undeserved neglect with which the Italian Gothic had been treated, and the influence of locality upon each style of the Middle Age Architecture. I was soon led to suspect that this Architecture was susceptible of much more extended generalizations in its principles than had hitherto been attempted, and I have ventured to point out the road to some of the most obvious.

Amongst other objects I was naturally led to search for evidence that would throw light upon the origin of the pointed arch. There is a fascinating simplicity about that theory which would derive it from the requirements of vaulting, that makes one wish to find it true; but I am sorry to say, that notwithstanding the favourable

prepossessions with which I set out, I have been compelled to dissent from this ingenious hypothesis. It appeared from an examination of buildings belonging to the period of the introduction of this arch, that it was only one of a great number of new forms then introduced into architecture, such as trefoils and ogees, as I have exemplified in the fifth Chapter. A theory therefore that only accounts for one of these must be imperfect; but this is not the only weak point about the one in question, for I have shewn in the seventh Chapter, that so far from the pointed arch being necessary to enable a parallelogram to be vaulted, it appears that architecture was already in possession of several methods of performing this, which were not even superseded by the introduction of that form, but continued in use to the latest period of the Middle Ages.

If this theory must be rejected, it may be asked what other is to be substituted. I do not believe that we have sufficient data to determine the question, but as so many observers in all countries are occupied in the collection and publication of examples, this deficiency is daily diminishing; in the mean time I am inclined to think the balance of evidence in

favour of the Saracenic origin of these forms, all of which appear to have been used by them; and it is remarkable too, that both the trefoils and ogees are worked in the Arabian manner, on their first appearance, of which some examples appear in Pl. VIII.

But it has been well remarked by the author of the Architectural Notes on German Churches, that the pointed arch is but one among a vast number of peculiarities which, taken altogether, make up the pointed style; and I have endeavoured to push this argument still farther, by shewing that these peculiarities were in all probability the invention of different countries and ages, and that they were combined in various ways together, before they finally arranged themselves in that happy order which produced the Complete Gothic.

For making comparisons between one style and another, and for facilitating the rapid and correct observation of new examples, it is necessary that the connection and distribution of the parts should be well understood; I flatter myself that the strong distinction I have drawn between the Decorative and Mechanical structures of buildings, will be found of great assistance in this respect;

and whatever may be thought of the attempt to deduce so much of the system of Middle Age Architecture from the compound arch, I trust that it will at least be conceded, that these styles lend themselves with a singular facility to this mode of analysis, and that it is therefore capable of forming the basis of a ready scheme of nomenclature and description.

I have been tempted to follow the history and treatment of many of the members of Gothic architecture even into the latest periods of the Cisalpine* styles, as well as those of Italy. I have done this partly to elucidate my own views of the subject, by applying them to objects whose forms are more familiar to my readers than those of the Italian Gothic; and partly, as I am not aware that so extensive a comparison of European styles has ever been made, I hoped that the attempt, even from my own imperfect data, might induce observers with better opportunities to complete the plan.

The plates that accompany this volume are selected from among a great number of similar

* I have inadvertently used this epithet in a sense directly opposed to that in which it is employed by our best writers, who retain its classical interpretation, expressing the Italian side of the Alps.

examples in my own sketch-book, with the exception of the three Augsburg windows in Pl. XII., which I found correctly drawn to my hand, in a sheet which I purchased at that place. I only regret that the necessity of reducing the figures to a much smaller scale than the originals, has considerably impaired their distinctness, but I hope not so much as to prevent them from shewing the connection and arrangement of parts, which it is a main object of these Remarks to illustrate.

DOWNING COLLEGE,
Jan. 1, 1835.

ERRATA.

PAGE	LINE	ERROR.	CORRECTION.
46	6	each foil	the central foil trefoliated and the rest
52	10 from bottom	*e*	*l*
107	14	*ab*	*cd*

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CHAPTER I.

INTRODUCTION.

THE Architecture of the Middle Ages in Italy has too often been treated with contempt, as if it were merely a debased Gothic, a bad and unsuccessful imitation of a barbarous style, possessing in itself no claims to originality, no peculiar character, no share in the successive mutations from which the complete Gothic was derived. That language like this should have been applied by the first Italian advocates of the classical style, to the buildings they were attempting to depreciate, is not surprising; and they included in their condemnation the whole of the then existing European specimens of architecture; but now that the beauties of that architecture are appreciated, and such enthusiastic attempts made to investigate its history and its principles, it becomes necessary to examine well every country into which it penetrated, before such investigation can be pronounced complete, and Italy must come in for its share.

Now, although Gothic architecture cannot be said to have flourished in Italy at any time,

or to have produced there specimens of beauty and grandeur at all comparable with those which arose under its influence on our own side of the Alps, yet it by no means follows that Italian Gothic is to be neglected.

When principles are to be recovered by the examination of examples alone, which is the case with Middle Age architecture, of which no precepts are preserved, the greater number of examples that can be compared, the better; and we are by no means to confine ourselves to the most excellent, for we may often detect the rules of successful practice by comparing the attempts of unskilful artists, or the experiments of experienced ones, with those specimens in which the desired effect has been obtained in the highest degree. In this point of view, the edifices of Italy possess a peculiar interest, as they appear to have been the result of a continual struggle between two principles, carried on by artists of high ability.

There is in fact, no genuine Gothic building in Italy; that style which, with an uniformity disturbed only by slight local variations, spread itself over Germany, France, Britain, Spain and the Netherlands, was never practised there, for her artists, always so pre-eminent in sculpture and painting as to attract foreigners to their schools, appear to have been emboldened by that pre-eminence to attempt

originality in architecture; and never losing sight of the classical structures, they hoped to succeed in giving their proportions and beauty to buildings formed with pointed arches, and other features either borrowed from the practice of their neighbours or invented by themselves.

The curious result is a style in which the horizontal and vertical lines equally predominate, and which, while it wants alike the lateral extension and repose of the Grecian, and the lofty upward tendency and pyramidal majesty of the Gothic, is yet replete with many an interesting and valuable architectural lesson.

It exhibits pointed arches, pinnacles, buttresses, tracery and clustered columns, rib vaulting and lofty towers; all those characteristics, in short, the bare enumeration of which is considered by many writers to be a sufficient definition of Gothic. It is well worth examining, therefore, how it happens that these characteristics may be freely and exclusively used in a totally different style, and this enquiry may lead us to the discovery of some more certain principles by which we may be led to compose and invent Gothic buildings instead of copying them piecemeal.

Besides this, it cannot be denied that these buildings possess lightness and elegance and beauty in details, although they have missed the decided character of the two great schools of architecture,

the Grecian and the Gothic. Their doorways, for example, are as elaborate and highly finished as any of the Gothic specimens, and their palaces and public buildings peculiarly picturesque and grand.

These observations apply to the examples of the thirteenth and following centuries, but of the preceding ones, we find objects in Italy of surpassing interest for the history of the art. The decline of classical architecture, the rise and progress of vaulting, and the early genealogy of many of the characteristic features of our own Gothic, may all derive essential illustration from a country which was the seat of so many of those events which influenced the vicissitudes of architecture.

Every city and town of Italy furnishes abundant examples of Middle Age buildings, but unfortunately in many cases so transformed by awkward attempts to convert them into classical designs, that it is impossible or difficult to extract the original plan from them; the capitals are concealed by Ionic or Corinthian masks, the arch mouldings plastered up into regular architraves, sometimes even the pointed arches changed into circular, the ribs stripped off the vaults which are covered with paintings and regular entablatures stuck against the walls. The church of the Lateran at Rome is a notable example of this process; and as drawings have been preserved of its original appearance, we can better judge

of the extent of the mischief; but in fact sufficient examples are not wanting*. Still even in those that have suffered the most in this way, some chapel or neglected corner may be discovered, which, untouched, preserves the original appearance, and serves as a clue to the whole transformation. If all the churches had been so served, it would be a hopeless task to investigate the Italian styles, but happily quite enough have been preserved to answer our purpose. In Tuscany especially and in the north of Italy the churches generally remain unaltered, and it is curious to observe that the elaborate doorways and original west fronts are often to be found when the rest of the building has undergone a complete transformation, or perhaps been rebuilt; as at Spoleto and Foligno.

Before entering more fully upon the consideration of the Italian buildings, it is necessary to make some observations on the history of the Middle Age buildings throughout Europe, with a view to the general elucidation of the subject, which does not appear to me to have been treated in the proper light. One class of our writers wishing to confine all Gothic styles to our coun-

* S. Croce in Gerusalemme and S. Maria degli Angeli at Rome, S. Giov. and Paolo at Venice, S. Eustorgio Milan, the Cath. Cremona, and most of the fine old churches at Naples, may be mentioned as examples, which should be well examined, in order to understand the surprising extent to which such transformations may be carried.

try, and treating the continental specimens with contempt, while others seem to expect to find the origin of Gothic architecture in some individual building, or evade the history of its invention, by asserting it to have been derived from the East; and a third hypothesis is, that different nations beginning from the classical specimens, and gradually transforming them, were all led in the course of ages to the same Gothic style, although by different roads.

If this be taken merely as a phrase expressing the vicissitudes of architecture in each country, without regard to the mode in which they took place, it is undoubtedly true; and we may add, that after discovering the identical Gothic style, and wandering from it in different manners, they were all led to the same revived classical form, for a chronological review of the buildings of any one country in Europe compared with another, presents exactly this phenomenon; they start from the classical style and return to it, and midway are found practising the same Gothic, and all the intermediate steps are different; but this was not done without mutual communication.

Contrary to the practice of our own age, which is to imitate every style of architecture that can be found in all the countries of the earth, it appears that in any given period and place our forefathers admitted but of one style, which was used to the complete exclusion of every other

during its prevalence. After enduring for about a century, this style gradually gives way and another makes its appearance, which in turn assumes the exclusive privilege, and is in turn superseded, so that the buildings of every country may be distributed under two general heads: Those that exhibit the distinct features of an established style, and those that contain a mixture of the features of two consecutive styles, which are commonly called Transition Specimens. The nature of the last will of course depend on the manner in which the new style has arisen.

The inference to be drawn from the works of some of our writers is, that these architectural changes took place simultaneously over Europe, and therefore that the transition specimens exhibit the successive steps of invention by which each new style was formed out of the preceding. So long as the enquiry was limited to England, and it was imagined that all the Gothic styles arose in and were confined to it, this view presented no difficulty. It was not so impossible that the transitions might be taking place in the practice of a single country at the same time, but now we know how extensive the dominion of these styles became in Europe, it never can be imagined that the same changes were going on simultaneously in countries independent of each other, in different states of prosperity, and often at variance.

When a new style appears in a country, it must either have been invented in that country or have been introduced from some other. In the first case it appears probable that the invention will be made by successive steps, and that regular transition buildings will be the consequence; but in the second case, as the new style is supposed to be brought in complete, it appears at first sight as if there ought to be no transitions; still, something like them may be supposed to be produced in the following way.

It would only be on occasion of erecting some building of greater magnitude than usual that foreign artists would be employed, and these would naturally produce a complete specimen of the style then practised in their own country, and we will suppose, totally differing from that habitually made use of. This new work would of course create a great sensation, and everybody would be for following the new fashion; the native architects, driven to imitate the new style, would produce specimens in which new and old would be mixed in different gradations, according to the skill of the individual and his power or opportunity of mastering the new principles. Some too would persevere in their old practice, while the foreign artists would also be employed in erecting other buildings, so that at the same period of time, and in the same country, we should have buildings in progress, some in the

old style, some in the new, and others in every possible gradation between them. These may be called *Imitation* Specimens, to distinguish them from regular *Transitions.*

This employment of foreign artists is commonly alluded to in old chronicles, and the sensation which their works excited is mentioned in passages of this kind, which have been quoted in the well-known treatises of Bentham, Hawkins, and Murphy, and serve to shew that the above representation is not exaggerated.

Of genuine transitions we have clear examples in tracing the history of the Gothic in each country. After becoming completely and pretty uniformly established in Germany, France, the Netherlands, and England, it underwent in each a transition, which converted it into as many distinct branches, bearing all a resemblance to their parent, but differing from each other.

Of the second kind, in which imitation buildings are produced by the attempts of artists educated in one style to design in another, which is presented complete for their inspection, we have undoubted examples in the buildings erected immediately after the revival of classical architecture, in which we find the Gothic principles of design and construction most curiously mixed up with mouldings and ornaments borrowed from the Roman remains. And the practice even of our own age shews sufficiently how difficult it is

for an architect to design unmixedly in any style from the bare study of remaining buildings. I do not think that many modern Gothic buildings exist in which a considerable mixture of Grecian and Italian principles may not be detected, either in the arrangement or the decoration, and a collection of such specimens, from the time of Horace Walpole to the present day, would be a very pretty series of imitations.

It would require a much greater knowledge of examples than we yet possess to separate transition from imitation specimens in other periods of history, but there are many cases in which the existence of imitation is probable where it has never been suspected.

For instance, it is pretty well established that the Decorated style was invented and perfected on the Continent some time before it was introduced into England, therefore many buildings which exhibit apparent transition between Early English and Decorated must have resulted from imitation, and have been designed after the pure Decorated was brought here; others again may have been copied from transition specimens on the Continent, or have been introduced by foreigners during the progress to perfection of the Continental Decorated.

In asserting this, I do not imply any discredit on our own Middle-Age specimens; and in fact, unless it be contended that all styles were

invented in England, it must be allowed that some were introduced, and in that case I am totally at a loss to conceive the existence of transition specimens, without the explanation I have given. If this principle be admitted, however, it will throw considerable ambiguity over the system of dating buildings from their styles alone.

All countries in adopting a neighbouring style seem however to have worked it with some peculiarities of their own, so that a person conversant with examples can tell, upon inspecting a building, not only to what period it belongs, but also to what nation; the vicissitudes of architecture being subjected to the influence of locality as well as of time. This is a point well deserving the attention of every observer, for although the fact is certain, it still requires a laborious comparison of examples to enable us to define the local peculiarities. I shall endeavour as I proceed to point out those that have occurred to myself. Much of this local influence depends on the material used for building in different districts, and much on the state of sculpture and painting; thus in some parts of the north of Italy moulded brick and terracotta are used in great profusion for decoration, and exert a very intelligible influence on it. The sculpture of mouldings is carried to a much greater extent in Italy than on our own side of the Alps.

Again, much of the peculiarity of Italian Gothic is produced by the introduction of flat surfaces for the display of mosaic, or of painting; their profusion of marbles has led them to cover whole buildings with slabs, disposed in panels, or alternate horizontal stripes of various colours, producing to English eyes the most disagreeable effect; while the limited thickness of this coating excludes the depth and richness of the genuine Gothic mouldings*. Other peculiarities arise from the different arrangements required by different religious orders or ceremonies.

Our task then, if we hope to make out completely the history of architecture, must be; to examine and describe all the different styles of each country, with their dates and periods; to compare the specimens of each in one country with those of similar style in others, in order to discover in which the style arose, and

* The Cathedral at Florence, and its campanile are entirely covered with small panels of coloured marbles, intermixed with bands of mosaic work, and reminding one of an elaborate Tunbridge workbox. In the interior of the Cathedral at Pisa, both piers and walls are constructed in alternate horizontal courses of black and white marble; the same fashion is followed in the front of the Genoese churches; and at Verona the courses are in red and white. A practice more destructive of architectural grandeur can scarcely be conceived; yet the Italians are even now so enamoured of it, that in parts of their buildings where it has been omitted, the black stripes have actually been supplied with paint upon whitewash.

into which it was merely introduced; the mode of its introduction; the way in which it affected the previously existing style; the modifications it suffered from change of material, local peculiarities of arrangement, and the habits of working; and lastly, when, and how it was superseded.

It must not be supposed that I am going to attempt in these few pages, that which in fact must be the result of the accumulated labours of many travellers. This work has been worthily begun by our English antiquaries, especially by Rickman; without whose admirably systematic method the task would be hopeless, from the multiplicity of specimens. I need not remind those acquainted with this subject, how ably this method has been extended and applied to the illustration of the German churches, in the "Architectural Notes*." I have presumed to follow these examples in an attempt to supply Italian travellers with a similar guide for that country; but, as it is impossible to compress a mass of facts like those treated of into a manageable space, without some theoretic

* The great work of M. Seroux d'Agincourt has done much for the history of Italian architecture; and in the earlier centuries, and restoration of classical architecture, is most excellent. It is perhaps no censure upon him to say that he has failed in the intermediate part; that is, in the ages of the Pointed Styles; for which a much more accurate examination of examples was requisite than had been attempted in his time.

or generalizing views, I have ventured to introduce many suggestions relative to the Middle-Age architecture of Europe, and to the way in which I conceive its characteristic forms to have been gradually deduced from the classical.

CHAPTER II.

ON MECHANICAL AND DECORATIVE CONSTRUCTION.

THE eye, even of an unpractised observer, when viewing a magnificent building, is never satisfied, unless the weights appear to be duly supported, and it receives a corresponding pleasure when that is the case. Hence in all complete styles, part of the decoration is made to represent some kind of construction, and the more completely this is effected, the more satisfactory becomes the result. To be sure this apparent frame is often totally different from the real one, but so long as the inconsistency is concealed, that is a matter of no consequence.

It appears then, that there are two things to be observed in the construction of a building; how the weights are really supported, and how they seem to be supported.

The first I shall call the *Mechanical*, or actual construction, and the second the *Decorative*, or apparent construction, and it is necessary to make a strong distinction between them.

In the Decorative sense it is allowable to speak of shafts sustaining weights which are

really held up by their connection with the wall behind, and which would, and often do, remain in their place, the shaft being removed; so entablatures rest on columns, when they are both merely represented in relief upon the wall, architraves must be proportioned to the apparently superincumbent wall, which in reality is sustained by an arch, turned behind the plaster or marble covering; in short the whole language of description must be applied to the connection of parts as they appear to the eye merely.

The Mechanical construction is no less important; and above all should be observed, the artifices by which it is concealed, and adapted to what is very often a totally different Decorative construction.

In Egypt, and in Greece, we behold the actual stones of which the building is composed ornamented with mouldings, and so decorated as to display their connection, while the whole style of architecture is accommodated to the principle of horizontal weights resting on perpendicular props. In this case, the Decorative construction of the building is identical with its Mechanical construction; and we may naturally expect to find it so in the early works of men, unfettered by previous notions.

After the arch and the vault had enabled the Romans to construct large buildings with

small materials, it is curious to trace the struggles by which the arch forced itself into the *Decorative construction.*

At first, the arch is introduced sparingly, and only in cases of necessity. It is either actually hid under the plaster, or it is kept subservient; and, as if the architect were ashamed of it as a clumsy and economical expedient, all the resources of the Decorative construction are employed to conceal the important place it holds in the mechanical structure of the building. Gradually we find the vault first, and then the arch, assuming a more prominent place, only to produce that discordant effect which must ever result from the attempt to harmonize two contending principles.

For when the arch is employed, the diagonal strains which it produces must be provided for; and as the Decorative system of the Greeks was founded upon a mechanical structure that only exerted perpendicular pressures, it is clear that the diagonal ones must be concealed by huge rectangular masses, decorated so as to appear as if sustaining vertical pressures only, unless we choose to invent new decorative forms for the diagonal props. The Romans attempted concealment, and hence introduced discordance between the decoration and the mechanism of the structure. The Gothic builders in later times more wisely adapted their decoration to

the exact direction of the resisting forces required by the vaulted structure.

What style however would have eventually resulted from this conflict, had the empire retained its flourishing condition and the arts their perfection, it is impossible to say. The Romans were making rapid strides in the art of vaulting when the removal of the seat of empire to Constantinople, and with it of the best artists of all classes, appears to have also transplanted this growing art to the soil of the East. The latest vaulted hall in Rome is the so called Temple of Peace, now held by the Italian antiquaries to be a Basilica erected by Constantine. In the East, vaulting on a large scale continued to be practised, and received the improvement of suspending a dome over a square by means of pendentives, of which St Sophia at Constantinople is the great specimen. This *Byzantine* style, so regularly derived from the Roman, was brought back to the West, first to Ravenna by the exarchs, and afterwards by the Venetians in the eleventh century, as exemplified in St Marc and other buildings of their district.

In the meantime the great Christian churches erected at Rome, under the patronage of Constantine and his successors, shew but too plainly the deplorable state of architecture in the West. They are to be sure large and lofty, but consist of parallel ranges of columns, of different orders, adapted without skill from the destroyed temples,

and sustaining upon arches, walls of disproportionate height, covered with open wooden roofs; the whole bearing every mark of ignorance and neglect of rules.

In the districts remote from Rome another process of architectural change was going on. Here the ravages of the Barbarians swept away the ancient rules altogether, and left only the shattered examples; and here we find that after they had settled themselves in their conquests, their builders, working as unschooled imitators, copied the construction of these ruins, and employed their materials, using the fragments of decoration, but naturally placing them so as to be entirely subservient to the actual construction of the building. Where new ornaments were required they imitated the old ones or invented others.

In this way were formed the various styles of the ages preceding the eleventh century, the German and French Romanesque, the Lombard, Saxon, Norman, Saracen and others, all of which have features differing entirely from those by which the Byzantine and Christian Roman are separated from their common origin, and all exhibit more or less of a barbarous and rude character.

They constitute however so many different and independent sources from which may be traced the formation of the Gothic, some supplying one fea-

ture and some another, while others, after enduring many transitions, were entirely superseded by the introduction of some descendant of the first.

It will be seen that I have supposed two ways in which these architectural sources were produced; one by regular transition from the antique, as the Byzantine and Christian Roman, to which may be added the Pisan; the other by imitation, as in the Barbarian inventions. But although each style has many distinct features, they have others in common which may easily be accounted for by the universality of the church, in which it was not unusual for her ministers to be also her architects. It is probable that most of the cases in which new styles or decorations are brought into a country, may be traced either to the introduction of foreign priests, or to the pilgrimages of the native ones.

In tracing architecture from these sources, we soon find it throwing off its barbarous characters; the arch and vault no longer trammelled by an incompatible system of decoration, but favoured by more tractable forms, are only limited by the skill of the builders, and at length a new decorative construction is matured; again, with admirable ingenuity separating itself from the mechanical construction, but not, as at first, thwarting and controlling it, but assisting and harmonizing with it; this is in the complete Gothic style.

This style is remarkable for the skill with

which all the ornamental parts are made to enter into the apparent construction. Every member, nay, almost every moulding is a sustainer of weight, and it is by this multiplicity of props assisting each other, and the consequent subdivision of weight, that the eye becomes satisfied of the stability of the building, notwithstanding their slender proportions. Add to this, that the greatest pains are bestowed in giving apparent lightness to the weight sustained, while in the mechanical construction, no less practical knowledge is displayed in proportioning props to pressures. To appreciate this, it is only necessary to compare the Roman vaulted halls with the Gothic cathedrals.

Whilst, however, this style was maturing itself on the north of the Alps, the great and increasing influence of the schools of art at Pisa appears to have prevented its adoption in Italy in its genuine form. They borrowed its ornamental characteristics, but gave it a fashion and proportions of their own, more nearly agreeing with those Greek notions of art which they seem never to have forgotten.

They succeeded, however, in forming a style which I shall call Italian Gothic, of which the best specimens are those of Tuscany, especially of Florence; this arose at the end of the thirteenth century, about the same period at which the Decorated style was introduced into our own country.

It is curious enough that in the Neapolitan territory, in Naples especially, many specimens or rather fragments of good Gothic buildings are to be found which were erected under the Angiovine dynasty, beginning in 1266, with Charles, son of Louis VIII, king of France, and ending in 1435. With this exception, I do not believe that a single unmixed Gothic church is to be found in Italy.

When the revival of letters awoke the work of Vitruvius from a sleep of nine centuries, a passion arose for applying his rules, and men set about comparing them diligently with the ruins that still remained of the ancient examples. But now, with that strange perverseness that has always prevailed in architecture, we find buildings which their contrivers imagined to be perfectly classical, retaining both in their mechanical and decorative construction the Gothic principle, and being only Vitruvian in the superficial carving, the entablatures and members of the orders. This mixture or imitation continued for a long while, nay, may be said to prevail even at present in the Palladian school, where we may discover clustered pilasters and other contrivances of the Gothic constructors. In fact the arch and vault must always in its decoration lead to such results*.

* The reintroduction of classical architecture is due principally to Brunelleschi and Alberti, both of them born at

But neither the complete Gothic style nor the Italian Gothic arose at once from the Romanesque and other sources which I have enumerated, on the contrary, there is in every country a different, intermediate, and, in many, a well characterized style which has been called Early Gothic, but may substitute the name of each country as a distinction; thus we have Early English, Early German, Early French, terms already used by Mr Rickman and the author of the Architectural Notes, and to these I shall add, Early Italian, to express a large class of churches erected in that country and in the Early period, but the style of which, like the Early German, is not very definite.

In Italy the Gothic was at once superseded by the Revived Classical, but in other countries it had time to decline into forms, which may be termed the After Gothics, and which in Germany, the Netherlands, France and England, constitute as many different styles, although

at the beginning of the fifteenth century, and in the same city, Florence; the latter published the first treatise on the Vitruvian architecture, in 1485, and both of them erected buildings in which they used the orders, the first principally at Florence, the latter at Mantua. The best account of its introduction is to be found in the work of Agincourt, of which an 8vo. edition has been published in Italian, infinitely more convenient for reading and reference than the unmanageable folios of the original.

derived from a common parent. In the two latter they have been termed Flamboyant and Perpendicular, and were all eventually superseded by the Revived Classical, which spread itself from Italy over the whole of Europe.

In this rapid exposition of my own notions of the history of Middle Age architecture, I have not attempted to enter into particulars, principally because I have been led to adopt some peculiar views on the subject of its decorative features, which would have rendered a more minute statement of the history unintelligible, but which I shall endeavour to explain; taking each part separately. These decorative features differ in many respects from the classical, but the leading principle is to be found in the increased multiplicity of parts, and in a system which affected to support them all independently; arranging them in groups, in opposition to the classical scheme in which the parts are simple, and bound together by the dominant cornice.

The clustered column is one of the most prominent features of a Gothic vaulted room, and is therefore always set forth as a leading characteristic of the style. But the clustering of a pier is not merely a kind of enriched fluting, for every shaft and moulding which compose it bears a definite relation to the parts which lie above it, every one of which receives, in the deco-

rative sense, an independent support from some member of the cluster.

And notwithstanding the apparent variety of these groups, a remarkable degree of system may be detected by the comparison of them. If it were merely for the illustration of the subject, it would be worth while to attempt to recover the laws and rules by which this system was governed; but when we discover in addition to its uniformity in one age and country, that it was practised in different manners in different ages and countries, that its various parts may be traced from different districts, some from the earliest ages, others of later invention, the whole being gradually brought together with increasing complication, a new interest is excited, and the investigation becomes absolutely necessary to the history of architecture.

I have said, recover the laws, because the possibility of detecting them proves that they were recognised by the artists, and I have no doubt that the parts of Gothic decoration were as well defined in their own age, as the division of a Roman entablature into architrave, frieze and cornice, which, had Vitruvius been lost, we must have picked out for ourselves from a comparison of examples, just as I propose to pick out the Gothic rules.

Clusters are largely employed for the support of arches, as in rich doorways or the pier arches

of churches; an archway of this kind may either be considered as a single arch decorated with a quantity of mouldings disposed in succession on its slanting surface, and supported by a group of shafts and moulded pier-edges; or it may be resolved into a number of concentric archways successively placed within and behind each other, and it is in the latter view only that I shall consider the question, calling the whole a compound arch, archway or piers; the term archway of course including the arch and its piers or uprights*.

The advantage of this view is, that when these arches are considered as a whole, the variety of them appears so great, and the decoration so various, that no systematic description can be applied to them, and as many drawings, therefore, as there are examples, are required to convey an accurate idea of them; but by dividing them into separate arches it will be found that the treatment of these is reducible to a few simple principles, of which a correct idea may be conveyed by figures, and that it is by variously combining these arches that so many different ones are produced, all of which may easily lend themselves to the language of description, when the elementary notions are thoroughly acquired.

The simplest form of a compound archway is that of Pl. IV. Fig. 3., which consists of three

* Thus Pl. XIV. Fig. 1. and Pl. XV. Fig. 8. have compound archways.

rectangularly edged arches placed behind each other in succession. This is to be found in many early buildings of the Romanesque period, and even in our country, as in the pier arches of St Albans; *abc* Pl. IV. Fig. 2. (part of the nave of the cathedral of Avignon) may serve as another specimen consisting of two arches only. But the compound archway did not long remain in this simple form, its component archways were early decorated in various ways with shafts and mouldings, and we must examine a little the different modes of their application before we can follow or understand these vicissitudes of form.

CHAPTER III.

IMPOSTS.

A PRINCIPAL feature of an archway is its impost. Impost is, properly speaking, an abstract term implying the point where the vertical line joins the curve, but I use it here rather as relating to the manner in which that junction is managed with respect to the decorative parts.

The simplest impost is that in which the mouldings of the arch are continued without interruption down the uprights to the ground or base, the impost point having no mark or distinction of any kind; *abc* Pl. III. Fig. 14. is a portion of a vaulting pier at Avignon* exhibiting imposts of this kind, which may be termed *Continuous*†. If we consider the common Grecian square-headed doorways as flat archways, the architrave mouldings constitute continuous imposts. This impost is very common in the later Gothic, and is to be found mixed with others in all the periods. In some late examples it pervades the whole building to the complete exclusion of capitals or impost

* In the churches of St Pierre and St Agricole.

† The reference only applies to the simple rib *abc*, and not to the interlacing mouldings of the other ribs, which will be treated of elsewhere.

mouldings of any kind, as for example, in the cathedrals of Orleans and Louvain.

Another kind of archway has the impost* decorated with horizontal mouldings upon which the arch mouldings stop, below these is a shaft which may be either round, octagon, square-edged, or decorated with flutings and mouldings, and may or may not have a capital to which the impost mouldings serve as an abacus, or, in Romanesque and earlier examples, as a kind of entablature. These imposts are divided into two classes, which may be called *Shafted* and *Banded*. In shafted archways the horizontal section of the upright is different from that of the arch taken immediately above the impost, and generally much plainer. Pl. III. Fig. 12. is a very common example, in which a plain cylindrical shaft supports a group of semi-octagon vaulting ribs. Examples may be found in Pl. IV. Fig. 7. Pl. IX. Fig. 8., and in many others, this impost being in fact the commonest of all.

In *Banded* archways, on the contrary, the section of the upright is the same as the section of the arch, so that the shaft appears to pierce and pass through its capital and to be carried

* That is, the decorative impost, or point at which the ornamental impost mouldings are placed, which is frequently below the real impost, as in Pl. IV. Fig. 9: where the real impost or change of curvature is at the level of *a*, but the decorative impost or change of ornament at *b*; in this case the arch is said to be stilted.

over the arch, while the impost mouldings and foliation of the capital appear like a band fastened round the mouldings of a continuous archway; this impost is used nearly to the exclusion of every other in the Gothic of Italy; thus, in the archways of doors, Pl. XIV. Figs. 1. 4. Pl. XV. Figs. 6. 8., the horizontal sections taken above and below the imposts are precisely the same (of course these remarks are not intended to include the shafts of the canopies). Pl. III. Fig. 13. is the impost of an Italian vaulting pier in which the same thing is to be observed.

In another class of archways there are neither mouldings or capital at the impost point, but the moulding of the arch is nevertheless different from that of its pier, and the junction of the two is managed by allowing them mutually to die against each other, as in Pl. III. Figs. 15. 17. In its simplest form this is not unusual in our own Gothic, where the uprights of an archway have plain chamfered edges, and the arch a quantity of rich mouldings dying against their upright faces, and there is an advantage in this arrangement, because if the rich mouldings were continued to the ground they would be liable to injury. In the continental specimens however this impost is made a great field for the display of curious and intricate stone-cutting. The upright mouldings are frequently as elaborate as those of the arch, and in all cases are so arranged as

to produce the greatest quantity of intersections.

This impost is never found in Italy, it may be distinguished by the term *Discontinuous.*

It appears then, that the Middle Age imposts may be divided into four classes and distinguished by two characteristics. Similarity or dissimilarity between the mouldings of the arch and its uprights, and the absence or presence of impost mouldings or capitals. The following table may serve as a summary of this classification:

		Mouldings of Arch and Uprights.	
		Similar.	Dissimilar.
Impost Mouldings or Capital.	absent	*Continuous.*	*Discontinuous.*
	present	*Banded.*	*Shafted.*

These adjectives will apply either to the imposts, archways or ribs, so that whether we speak of a banded archway, discontinuous impost, or shafted ribs, the arrangement is equally conveyed.

When arches or ribs spring from a corbel these distinctions vanish; but such arrangement may be called a *Corbeled Impost.*

Some archways have what may be termed Double Imposts; that is, one placed over another; thus, in Pl. III. Fig. 16., the mouldings of the

pier are continued through the capital at *a*, as in a banded impost; but above this the arch mouldings having a different profile, are made to die against those of the pier at *b*, as in a discontinuous impost; and this may be described as a discontinuous impost placed over a banded one; or, for conciseness, the whole may be termed a Discontinuous-banded Archway.

Again, in Fig. 17. the ribs *a b c* have a discontinuous impost at *f*, but lower down there is a kind of capital and corbel, forming a corbeled impost. This, with corbels or shafts, is a very favourite arrangement in the after Gothic of Germany, and may sometimes be found in our own.

When a group of richly-moulded vaulting ribs radiate from the small abacus of a single capital or corbel, it requires considerable skill to manage the intersection of their side mouldings; which, as the ribs approach, will of course meet and die in succession upon each other, until nothing is seen but the front moulding of each, immediately above the abacus. Sometimes this is got over by making only the alternate ribs prominent, and allowing the others to die as it were behind and between them at some distance above the impost, while the principal ribs are brought down fairly upon the abacus; but when this double impost is used the difficulty is removed, as each rib profiles upon the vertical face of a prism or cylinder, as *fg*, Fig. 17.

In Germany this impost prism was at first made with a number of sides exactly corresponding to the ribs, but in the later period this arrangement was found too simple, and the prism purposely made with a different number of sides, in order to display curious stone-cutting, by causing the ribs to intersect it upon its angles. I do not think that this impost is used in the After Gothic (Flamboyant) of France, although, as we shall see, they have other arrangements equally favourable to this kind of intricacy.

These two are the only kind of double imposts that I have met with *.

* Sometimes the sides of the impost prism incline backwards, forming a kind of pyramid, whose sides receive the ribs. Vide Britton's Salisbury Cath. Pl. VIII., or Lichfield Cath. Pl. XIV. Fig. 1.

CHAPTER IV.

SHAFTS.

SHAFTED ARCHES admit of considerable variety in the management of the shafts, especially when two or more arches are placed side by side, forming arcades. In describing shafts, it is convenient to make them take their denominations entirely from the manner in which they support the weight above them, rather than from their own position. Thus, shafts supporting ribs, or other parts of a vault, are termed *Vaulting Shafts.*

I believe that all shafts employed about the decoration of arches, or arcades, may be included under five heads.

Bearing Shafts are those which sustain the whole of the superincumbent weight, as the central shafts in Pl. IV. Fig. 5., and Pl. XII. Figs. 7, 8.

Sub-shafts sustain arches of which the upper *side* is united to the soffit of the next arch or wall. In Pl. IV. Fig. 1., the sub-shaft *a* bears an arch *b*, united by its side only to the concentric arch *c*. Such an arch is termed a *sub-arch*. Sub-arches are to be found at *SS*, Pl. V. Figs. 1, 2; also with square shafts and a banded impost at *bc*, Pl. IV. Fig. 2. In Pl. IV. Fig. 4. is a sub-shaft with a trefoil arch of a single order.

Face-shafts sustain *face-arches*, which have their back only united to the wall, and therefore appear as if placed on the face of it; *d* and *e*, Pl. IV. Fig. 1. and *f*, Pl. IX. Fig. 8. are face-shafts. All these three classes admit of being placed in pairs; thus there are a pair of bearing shafts in Pl. IX. Fig. 7., and face-shafts in pairs in Pl. IX. Fig. 9.

Edge-shafts have the sustained arches united by their sides and back to the nearest wall or arch, so that they appear to support their edge only, as in Pl. IV. Figs. 6, 7. Edge-shafts are so abundantly used in Norman buildings, that they may be said to be characteristic of that style; while, on the other hand, they are excluded from the Lombard and Pisan, and very sparingly used in the German Romanesque, but appear pretty freely in the Byzantine and Romanesque of the South of France. In place of them, the next class is made use of, which I shall call *Nook-shafts**; these are placed in the nook or internal angle formed by the side and face of the two contiguous arches of a compound archway. On the plan they resemble edge-shafts, but the rib they support differs from an edge-rib, in not being united to the contiguous wall; but,

* *Edge* and *Nook* are the only terms of our own language that express without circumlocution an exterior and interior angle. Angle and corner are plainly applicable to both cases indifferently.

like its shaft, is nestled into the re-entering angle formed by the side and face of the neighbouring arches. The section of the rib is most commonly exactly that of the shaft, or differs merely by being sculptured in a different manner; but sometimes octagon nook-ribs are used with cylindrical shafts.

In Pl. IV. Fig. 8. is a cylindrical nook shaft, and rib. Two are applied to the compound arch, Pl. XIV. Fig. 1., and three in Pl. XV. Fig. 8. But as I have already observed, these, with other forms of banded imposts, are used in Italy, both in the early and late periods, to the exclusion of every other kind, and they form a marked difference between the Cisalpine and Transalpine Gothic.

The shafts used for supporting the members of the vaulting are not included in this nomenclature, and will be more particularly considered in the chapter on that subject.

We are now enabled to describe the decoration of any compound archway, however rich and complicated. It must first be divided into its component archways, which may be called successive orders, and enumerated as first, second, and third, beginning from the external face of the wall, and proceeding inward to the smallest arch. If the archway be similarly decorated on the other side, (which is mostly the case with pier arches, but rarely so with doorways), then the same mode of de-

scription may be resorted to, by beginning with the opposite face of the wall, and proceeding inwards. The impost, shafts, &c. of each order may then be described.

Thus the window, Pl. IV. Fig. 3., consists of three orders of square-edged continuous arches. Fig. 6. of two orders; the ~~first~~ second has edge-shafts, the ~~second~~ first is continuous. Fig. 8. has two orders of continuous arches, and a banded nook-rib; the edge of the first order has a small chamfer. The archway in Pl. XIV. Fig. 1. consists of three orders of square-edged banded arches, with two interposed nook-shafts; and so on.

Some difficulty may perhaps be found in dissecting a Complete Gothic arch into its component arches, because the mouldings, which in earlier examples are only applied to their edges, are in this style made to cover the whole, and to run into each other, so that the entire arch becomes one mass of parallel mouldings. In this case the imposts will generally assist. If the arch be continuous, the mouldings are commonly arranged in two or more groups separated by hollows, and each group may be taken as one order of simple arches; when, as often happens, a shafted sub-arch or edge-rib is introduced amongst continuous ribs, the shaft at once separates its order; and when all the imposts are shafted, the orders must be determined from the shafts only. Pl. III. Fig. 19. is the profile

of an arch of this kind, which separates the nave from the transepts in S. Lorenzo at Naples; it may serve at once to exemplify the above observations, and to shew that the Gothic of that church is good French Gothic, as I have before observed.

The left-hand half of the figure is the plan of the pier, the right hand that of the arch mouldings. Both pier and arch are the same on both sides. The arch taken alone appears to consist of a group of mouldings only, but when compared with the shafts, falls at once into a system, in which each shaft has its own group of mouldings or rib. I should therefore describe it as a compound arch, of four shafted orders, consisting of a face-shaft (*A*), and its rib (*a*), two edge-shafts and their ribs (*B, C*, and *b, c,*) and a sub-shaft and rib (*D, d*). There are very few examples that will not admit of this kind of analysis; but as my intention is not so much to illustrate the Complete Gothic as to contrast it with the Italian, I shall not pursue the subject in this place.*

This arch in its present form is segmental, and stretches over the whole aperture of the nave, including that which was intended for the side aisles in the original plan of the church; for the present nave is an undivided room. There

* Compound arches will be further illustrated under the heads of pier-arches and doorways.

can be little doubt that this arch is formed from the stones that were prepared for the great pointed arch that should have separated the nave from the transepts. The choir is in its original form, and its interior is sadly metamorphosed; but the circumscribing aisle, with its polygonal chapels, remain untouched, and is shut off from the church and neglected. Here we might fancy ourselves suddenly transported to some French cathedral, so completely Gothic is the arrangement and decoration, and so totally unlike any thing else in Italy. It is the best preserved specimen in Naples of their Angiovine style.

CHAPTER V.

FOLIATION.

In all that has been hitherto said, it has been assumed that the arches of the consecutive orders of a compound archway are of similar form, and concentric; differing from each other only, by being successively smaller.

This rule may be departed from in two ways; the arches may be of different forms, as in Plate IX. Fig. 8., where the first order is a pointed arch, and the second a trefoiled arch; or the inferior orders may have two or more apertures, as in Pl. X. Fig. 4., where the second order has three arches to the single one of the first order.

From these two varieties I think I shall be able to shew that two essential characteristics of the Gothic style arose; namely, foliation and tracery.

From the invention of the arch to the middle of the eleventh century, no other form of it was used, except the semicircular and segmental. About this period licence was taken to alter the forms of arches; the pointed arch

was introduced, how, or whence, I do not at present attempt to say, and with it a variety of other forms, as ogees, horseshoes, and ellipses. At the same time there came in the practice of *Foiling* arches; that is, of uniting a series of three or more by their bases, so as to form one; which is termed a trefoil, quatrefoil, cinquefoil, and so on, according to the number of its component arches, or *foils*,* as they may be termed; these foils may be either of the same, or different forms, but are generally of an odd number, with one in the center, and the rest disposed in similar pairs on each side of it; they are often all circular, Pl. VIII., Fig. 8., or all pointed, and sometimes all ogees; an ogee, or pointed, between two circular foils Fig. 4., and Fig. 21., is a very common arrangement; the lower pair are commonly imperfect semicircles, from their being continued downwards to form the sides of the arch; but in some of the earlier examples are made complete semicircles, as in Pl. VIII. Fig. 1., and Pl. IV. Fig. 4.

How it happens that all these have escaped that attention which has been exclusively fixed upon the invention of the pointed form, I cannot tell; but an examination of the buildings of that period will substantiate the fact of their

* The term foil is manifestly derived from the French feuille.

simultaneous introduction. Not to multiply examples: Pl. VIII. Fig. 9., a cinquefoiled circular arch from the triforium of La Charité sur Loire; Fig. 3., an upright elliptical arch freely used in S. Marc, Venice; Fig. 2., an ogee pointed in the Arabian manner from the same church, in the doorways of the west front; Pl. IX. Figs. 3, 4., from the south-west tower of Mentz Cathedral, exhibiting trefoiled and ogee arches, mixed with circular; and Pl. IV. Fig. 4., a trefoiled arch from the Cathedral at Valence, may be cited, all of them from buildings of the eleventh century.

The pointed arch, from its united strength and convenience, of course assumed the prominent place, and was used in all the larger and essential parts of the fabric, while the other forms were reserved for the decorative arcades, the galleries, doors and windows.

These arches when at first introduced were treated in composition exactly in the same manner as the circular arches had been, and were mixed with them; the other characteristics of the pointed style were invented before or after their introduction, and may be traced from their first imperfect germs to their final perfection entirely amongst European buildings, so that the notion of the pointed style being introduced complete, is at any rate erroneous.

But to return to our compound arches, which, as I have said, were at first made up of similar and concentric arches. In buildings of the middle of the eleventh century and after, may be traced a practice of forming compound arches with different forms.

The arches of S. M. della Spina at Pisa, Pl. IX. Fig. 1., and of the Cathedral at Lucca, are segmental, and decorated with retiring faces, forming compound archways of three orders. These in the Pisan example retire so little as to resemble more the fasciæ of a classical architrave, which they would in fact actually be, were it not that the pilasters that support them also retire, while the external moulding has face-shafts, forming a curious melange between the Greek architrave and the Middle Age notion of independent support, then in its infancy; and perhaps shewing the origin of the compound arch, which was probably formed in this very way from the fasciæ of the architrave, by giving them greater relief, and continuing them down the archway sides as independent members.

Be this as it may, the example under examination possesses another curious feature, the arches not being concentric; and the same is the case at Lucca, where the retiring of the faces is greater, and they have a continuous nook-roll. In this departure from concentricity, we have the first step towards making the arches

of different forms; and of the next, there is an example in the front of S. Niccola, at Pisa, Pl. IX. Fig. 2., where the first and second order of arches are upright semi-ellipses, and the third a semi-circle. Figs. 3, 4., from the tower of Mentz Cathedral, exhibit compound arches, with their forms in this order, single semi-circle, double ogee, double semi-circle; and single trefoil, double semi-circle; again, Fig. 7., from the tower of S. Christopher, Mentz, has a double pointed under a single trefoil arch, which combination is also to be found in the Early English Lady Chapel of Winchester; Fig. 8., from the Cathedral at Nevers, has a trefoil under a pointed arch; Pl. X. Fig. 6., from the Cathedral of Modena, a double trefoil under a semi-circle; Pl. IX. Figs. 5, 6., from S. Gereon, Cologne, have multifoils under semi-circles, and Fig. 9., from the front of S. Fermo, Verona, has ogee-headed trefoils under pointed arches.

These examples are taken at random from all countries, and might easily be multiplied to a large extent, shewing that, during the intervening period between the introduction of the pointed arch with its accompanying forms, and the formation of the complete Gothic, all these new forms were used together in compound arches, and placed in all manner of ways above each other. At last, however, all these combinations fell into disuse, excepting

those which have a foiled arch placed below a plain one. A plain arch so treated is said to be *Foliated.*

There is a manifest distinction between foiling an arch, and foliating it. In the first case, the arch itself is indented into a number of small arches; in the second case, such a foiled arch is placed below it. The same treatment and terms are applied to circles and pannels of different forms. Thus Pl. VIII. Fig. 27. is a quatre-foiled circle, Fig. 28. a quatre-foliated circle; Fig. 8. a cinque-foiled arch, Fig. 9. a cinque-foliated arch.

This foliating arch continued for a long period to be treated as an independent order with its own piers, as in Pl. IX. Fig. 8. from the triforium of Nevers, a compound arch of two orders; the first has a face-shaft at *f*, and the second, which is the foliating arch, is a regular sub-arch with sub-shafts at *g h*; so in Figs. 9. and 14; Fig. 10. is a common form in the complete Gothic, where the arch and its foliation are independent and continuous; but the most common method in this style is that of Fig. 11., in which the foliation is made a mere appendage to the arch; growing out of its side as it were. As it is convenient to have a name for the triangular space included between the arch and two contiguous foils, it may be termed the foliating space.

Sometimes we meet with double foliation; in which each foil is again foliated. Thus in the canopy of Pl. xv. Fig. 7. is a multifoliated pointed arch, every foil of which is trefoliated, and Pl. ix. Fig. 17. has a trefoliated arch with each foil bifoliated.

The difference between the Italian and Cisalpine Gothic, is in no respect more marked than in the management of the foliating space. In the complete Gothic, its edges are wrought with a bold hollow chamfer, and its surface excavated so as to leave only a narrow fillet parallel with the edge of the foil, as in Pl. ix. Figs. 10, 11., and in the Early Gothic, as in Fig. 8., its edges only are decorated with bold mouldings.

In the Italian specimens, on the other hand, the edge of the foliating space is left square, and the surface is often employed for the display of sculpture, mosaic work, or shallow square-edged panneling,* as in Pl. ix. Figs. 13, 14. and 16. This is carried to a very great extent, especially in their monumental canopies and shrines. Fig. 15. represents one half of the arch of a canopy over the pulpit in the Cathedral at Naples. This arch has double

* Some solitary specimens of a somewhat similar treatment may be found in our own country, as in the cinquefoil of the west gable at Lincoln. *Britton Chronol. Antiq.* Pl. lii.

foliation, and the foliating spaces are occupied with a profusion of pierced tracery, in a manner which has, I believe, no parallel on this side of the Alps, but which is by no means uncommon in Italian examples, and produces great richness of effect.

In the After Gothic of Germany, foliation came in for its share of that fanciful rage for intricacy, by which that style is so oddly distinguished above every other, except the Flamboyant of France, equally whimsical in another way. And I cannot help indulging perhaps in a little national vanity, when I contrast the elegance, beauty, and architectural fitness of our own After Gothic, or Perpendicular, with the puerilities that too often disfigure the coeval styles of our rivals.

Fig. 12. is a foliating space to be found in the After Gothic of Germany, in which the fillets and mouldings are made to interpenetrate each other, and are abruptly cut off immediately beyond their intersection; and this kind of truncation is made to pervade the whole treatment of the mouldings.

In other cases, the points of the foils are made to unite and ramify, as in Pl. XII. Fig. 2., which is a specimen of this sort of exuberant foliation from Augsburg Cathedral. In the head of this window is a quatrefoil, each of whose foils is trefoliated with an entire trefoil; so that the

whole interior of the quatrefoil is occupied with a network of trefoils; the side arches of the tracery below, are multifoliated with an irregularly foiled arch, the two upper points of which are united.

Ramification of this kind in the foliation, is sometimes to be found in Italian tracery; two of the great circles in Pl. XIII. are occupied in this manner. The points of the foliating space may be either actually pointed, or they may be blunted, or tipped with balls, roses or little trefoils, as *G*, Pl. XIII., or Pl. IX. Fig. 14. All these methods may be found in the Early period, as well in Italy as elsewhere, and even in the later Italian Gothic.

CHAPTER VI.

TRACERY.

I HAVE endeavoured to trace Foliation from the introduction of arches of *different forms* into the same compound archway, and shall now consider the result of another variation; that is, the placing *multiple* arches behind one another.

I do not mean to assert that the examples cited either in the former chapter or in this are in exact chronological order, neither is it essential to my argument. Any one of these different phases of the compound archway must have remained in practice in the country of its invention for some time before and after it found its way into others, so that in selecting a set of transitions from different countries, we may take some that have continued in use in one place long after they have been superseded by the next step in other places. Neither does it follow that these steps arose exactly in the order in which I have placed them; but in the infancy of investigation, all that can be done is to establish certain general notions, and this is all that I pretend to do.

When two or more arches are placed side by side, forming an arcade, they may be of a single order, as in Pl. IV. Fig. 5., but are more commonly of two orders, of which Pl. X. Figs. 1, 2, 3, are early examples in the Italian Romanesque. Fig. 1. represents one story of one of the brick towers of which there are so many in Rome; and all precisely similar. Here the arches of the first order are sustained on small corbels, and those of the second by bearing shafts standing on the middle of the wall, and sustaining the weight by means of long block capitals, rudely tapered towards each extremity.

This kind of midwall shaft is to be found in an immense number of early examples, and even in England*.

Pl. X. Fig. 2., from the front of St Michele at Pavia, is somewhat different.

But this position of the shaft is at best but a barbarous contrivance. When viewed from below or obliquely, it is almost concealed by the face of the wall or sides of the aperture, and considerable improvement was made by bringing it forwards.

Thus, in Fig. 3., a window from the front of S. Zeno, Verona, the wall is sustained behind the shafts by a single independent arch, and the shafts are brought into sight by being placed in

* For example, tower of Bene't Church, Cambridge.

front. Here we have a great step towards the formation of a decorated opening, for in the case of a mid-wall shaft, the arches of the arcade are still separate arches in the wall, but when the shaft is brought forwards in this manner, the arches and shafts form one ornamental screen before a single aperture.

In all these cases, the first order of arches are concentric with their sub-arches, and rest on corbels attached to the abacus of the bearing shafts; and this form of arcade continues for a considerable period. It is to be found in the triforium of Parma, the campanile of Siena, and in many other cases of a similar date.

The next step is made by including the arches of the second order under a single arch which constitutes the first order, leaving a wall space between its own soffit and their heads. The triforium of Pisa, in which some of the arches are double and some triple, and the triforium of Modena, Fig. 4., with the exterior compartments of the same cathedral, present this arrangement, which is also to be found in the triforium of Jumieges, that of the Norman transept of Winchester, (where however the arches have edge-shafts,) and in many Norman and Romanesque buildings. Fig. 7., from the oldest part of the triforium of Lyons Cathedral, may serve to shew that this arrangement was carried far into the Early Gothic period.

In all these cases the space interposed between the smaller arches and the large one is left blank; but so promising a field for enrichment was not likely to remain unoccupied, and was accordingly soon pierced with apertures of various forms. In Fig. 5., from St Stefano, Genoa, it is decorated with a square pannel; in Fig. 6., from Modena Cathedral, with a kind of quatrefoil.

To constitute genuine tracery one property still remains; that the sides of the piercing apertures should be parallel to each other; for without that, the character of ramification is wanting, and the tracery is not susceptible of decoration by superficial mouldings. This is easily effected by piercing intermediate apertures between the principal ones. Thus in Pl. x. Fig. 11., from St Gereon, Cologne, the window, which consists of two lights and a trefoil, is formed into tracery by the intermediate compartments *a*, *b*, *c*, *d*, *e*, whose sides being cut parallel each to the neighbouring one, give the characteristic property. In Fig. 10., from the same church, the principle is just missed, being apparently not understood by the artist who designed it. I have selected this pair of windows, because they appear to belong to a very early period of tracery; and the very failure of the second serves the better to illustrate the subject.

In these simple and early examples, the edges of the compartments are merely chamfered, and this plain fashion is to be found in some small examples even to the latest times, and very frequently in Italy; but the larger specimens are decorated with various mouldings, and the manner of disposing of them still betrays their origin from the compound arch, and follows similar rules of subordination.

The neighbouring sides of the compartments being parallel and equidistant, the surface left between them is necessarily a fillet of equal breadth, which ramifies and traces out the whole of the ornamental figure. This is accompanied in its course by side or edge-mouldings, which are the same on both sides of it, so that make a transverse section of the whole mullion or tracery bar* where you will, it is every where alike, except when a compartment happens to be so small that part of the inferior mouldings are lost for want of space†. Sometimes the fillet itself is covered by a roll-moulding which ramifies with it, and it is remarkable that this is the only way in which the surface of tracery is decorated, from its first invention to its disuse,

* In the frame which constitutes tracery, the vertical portions below the imposts of the small arches of the lights, are termed *mullions*; the bending and ramifying parts above, I have called *tracery bars*.

† For instance, the section taken from *f* to *g* in Pl. x. Fig. 11., would be the same as that from *k* to *l*, and so on.

whether in Italy or elsewhere This enables us to divide it at once into two classes, Fillet-tracery and Roll-tracery.

The proportional breadth of the fillet varies very much; thus, in Pl. XII. Fig. 7. (a window of a house in Verona) it is very broad, and it is not uncommon to find it so, especially when the specimen is of an impure or ill-worked Gothic. On the other hand, it is occasionally narrowed so as to reduce it nearly to an edge. The fillet of the foliating space in our own Gothic is often so treated, and a circle in the great chapel windows on the south side of St Petronio at Bologna, is filled with tracery of this kind.

But as we have compound arches of several orders, so we may have tracery of several orders; and in that case, the rule just given for the disposition of the mouldings requires modification. For example, Pl. X. Fig. 8., is a piece of tracery from the triforium of Lyons, but is very much the same as our own Early English triforiums; if we consider this as a compound arch, we have the first order of mouldings on face-shafts *aa* following the external arch only; but the second order having edge-shafts at *bb* and a face-shaft at *c*, follows the outline of the tracery, while the third order on sub-shafts *ded*, constitutes the foliation both of the arches and of the circle above them. Again, it is easy to imagine that this third order of mouldings

might have also subdivided the arches of the second order into two or more, and have furnished their heads with tracery, just as the second order fills up the first; and it is actually in this way that the richer tracery is managed.

In Fig. 12*, the whole window is a compound arch of three orders of mouldings which are of the simplest description, a plain chamfer; the first order follows the great arch only, the second divides it into two arches with a quatrefoil between, and the third divides each of the smaller arches into two trefoiled arches with a quatrefoil between.

Now, the section *fg* (*A*) will be the same as *mn*, but that at *gh* will have the addition of the second order as at *B*; and *fk* will include also the profile of the first order, as at *C*. In this specimen the great quatrefoil consists of one order only, but in a more advanced state of the style this would also have been occupied by subordinate ramifications of the third order. The analogy however between the subordination of the mouldings in this figure and in Fig. 5., where the tracery is in its imperfect state, is clear; and marks the derivation of the whole system from that of the compound arch.

* From S. Andrew, Cologne, *A*, *B*, *C* are the plans of the mullions.

As a complete example of tracery we may take Pl. XII. Fig. 4., from the Cathedral at Louvain, a rich window of four orders, not including the foliation; which, as it is of that kind which springs from the side of the arch, as in Pl. IX. Fig. 11., can hardly be enumerated among the orders.

The right hand half of the figure is in outline only, the more clearly to shew the places of the different orders. The first follows the great arch as usual, the second is shewn by double lines, the third by single, and the fourth by dotted lines. *A*, is the profile of the window side, and *B*, *C*, *D* of the mullions and tracery bars at *b*, *c*, *d* respectively; the whole of which are shewn on a larger scale in Fig. 9. The natural effect of the system of mouldings is to produce different classes of mullions and tracery bars in each window, of which we have already had an example in the last specimen; similarly, in the present one, the smallest (*D*) contains only the lowest order of mouldings; the next class (*C*) includes the two lowest orders; and the next (*B*) the three lowest, while the window side (*A*) has all the mouldings. The number of these classes including the window side, is always equal to that of the orders. In Italy, however, where each mullion consists universally of a single bearing shaft, as it often

does too in the Early Gothic, the above rule applies only to the tracery bars and window-arch side. It is worth remarking that the profiles are often, as in this case, so managed that the orders form alternately, roll-tracery and fillet-tracery*.

In drawing windows, a simple outline, such as Pl. XI. Fig. 4†, is sufficient to mark the ramifications of tracery if accompanied by plans of the mullions, but the lines should always be marked so as to indicate the subordination, either by using single and double or dotted lines, as in Pl. XII. Fig. 4., or by inserting the primary orders only in one part or half, as in Pl. XI. Fig. 2. This is the great circle in the south gable of S. Antonio at Padua, and is an excellent example of subordination. It consists of four orders; the first surrounds the circle only, the second and third constitute the tracery, and the fourth the foliation. To make the distribution clearer, I have only drawn the upper half (*adc*) of the window complete, the quadrant *ab* contains the second order

* The merit of first pointing out the regular subordination of mouldings in tracery belongs to Sir James Hall, whose Essay on Gothic Architecture contains an elaborate dissertation on this subject, unfortunately shorn of its utility by the accompanying hypothesis of its derivation from basket work, which I doubt has deterred many from giving it the attention it deserves. Mr Rickman has also noticed it with his usual concise clearness, but I do not think it so generally attended to as it ought to be.

† From SS Giovanni and Paolo, Venice.

only, and *bc* the second and third; the first, of course, circumscribing the whole. The shafts are of two sizes, the smaller belonging to the two inferior orders, while the larger bears three. *A*, *B*, *C* are the mouldings.

Pl. XI. Fig. 6. is a circle which forms part of a great window at the east end of S. Domenico, Perugia; I regret that my limits will not allow me to introduce the whole design. This portion has three orders of successive foliation, and (as in the former example) I have represented the upper half only complete; the quadrant *ab* with one order only, and *bc* with two.

Sometimes foiled compartments are substituted for foliated ones in tracery, as in the inferior order of Pl. X. Fig. 12. and in Pl. XII. Fig. 7.; and in other cases where foliated compartments are used, they are wrought with the same order as the tracery, as in Pl. XI. Fig. 3., where the roll-moulding runs equally over the tracery and the edges of the foliating spaces.

In the late Italian Gothic there is a singular departure from the rule I have given with respect to the mouldings. In their tracery the principal compartments are traced out by a fillet, as already explained; but that done, each compartment is treated as a separate pannel and decorated with different mouldings, and in a different manner from the rest; so that instead of the sections of each tracery bar presenting a set of mouldings

symmetrically disposed to its center, those of one side are generally different from those of the other. Pl. XIII., the head of a window of the church of Orsan Michele at Florence, shews this principle very fully. The whole window is of lofty proportion, and the arch into which it is inserted was originally open, but the building having been converted into a church in 1337, this piece of tracery was employed to close the archway. In the figure the left half has the fillet only inserted, and Fig. 2. the section of the mouldings along the dotted line *mn*, which is made to pass through one pannel of each kind, shews that they are all different. It is remarkable too, that only the circles *B*, $B_{,}$, *F* and the lower arches are pierced and glazed, the other compartments *A*, *C*, $C_{,}$, $C_{,,}$, *D* are merely stone pannels filled with sculptured foliage. The tracery which occupies the three pointed arches exhibits subordination of mouldings in three orders, marked 1, 2, 3, both in the elevation and section Fig. 2. The circle *B* is occupied with a kind of exuberant foliation already described.

In the infancy of foliation, windows are to be found in which it appears to be formed entirely by piercing circles which break into each other. Pl. XI. Fig. 5. is one of these from the Cathedral at Modena, where six circular apertures surround a central one which cuts into them all, forming a kind of *sixfoil* The south transept of Lausanne

Cathedral has a magnificent circular window entirely constructed on this principle.

It may be remarked, that Foliation and Tracery are perfectly distinct members of decoration; tracery often existing without foliation, and foliation being applied to a single arch when no tracery is present.

Hitherto I have confined myself to the management of the mouldings and foliations of tracery, and have said nothing of the form of the compartments to which it owes much character. Of course only the principal compartments are alluded to, and those excepted which are merely interstitial, as *a*, *b*, *c*, *d*, *l*, Pl. x. Fig. 11.

With respect to the figures of tracery, the division of Rickman into Geometrical and Flowing is excellent, and possesses the advantage of great clearness; but it excludes some classes even of English specimens, and others which are peculiar to the continent.

The Flamboyant or After Gothic of France derives its name from the appearance of its tracery, in which are employed compartments resembling the forms of flames, and which may be defined as being included between two wavy lines, and divided unsymmetrically by one or more wavy lines, such as Pl. VIII. Fig. 30. Occasional specimens have found their way to England, as in the window of Magdalene Church, Oxford, (figured by Sir J. Hall, Pl. XII. Fig. 1.)

The After Gothic of Germany, on the other hand, has tracery in which the ribs are made to pass through each other, and are then abruptly cut off. This may be called Stump Tracery. Pl. XII. Fig. 1., from the Cathedral at Augsburg, is a window of this kind, and Pl. IX. Fig. 12., already described, will explain better how the intersections are managed.

In other specimens of German tracery, the character of stability so beautifully preserved in our own Gothic, is grievously neglected; thus, in Pl. XII. Fig. 3., from Augsburg Cathedral, the heads of the lights are inverted arches, and the quatrefoils are suspended without apparent support. Fig. 5., a Flamboyant example from the triforium of S. Nizier, at Lyons, is liable to the same criticism.

Amongst Italian tracery, may be found both geometric and flowing specimens, but always with upright compartments; that is, compartments which may be divided symmetrically by a vertical line. Those in which the compartments recline to the right and left in pairs like plumes, such as Pl. VIII. Fig. 29., are never found in Italy. Their most common patterns of tracery are geometrical, in which one, two, or more arched lights occupy the lower part of the window, and the space between that and the head is filled with circles. A mixture of round, pointed and ogee arches is common; and in the larger windows

the circles instead of displaying the skilful management of the complete Gothic, always convey a disagreeable idea of crowding and packing, as in Pl. XI. Fig. 4. (transept of S. Gio and Paolo, Venice), or the great window of S. Domenico, Perugia.

The pervading pattern is in Italy, as in the rest of Europe, two arches bearing a circle (as in Pl. X. Fig. 8.) Fig. 9. S. Marc, Rome, is an Italian example entirely worked in round arches, also Pl. XI. Fig. 2. The Cathedrals at Arezzo, Florence, and Verona; S. Croce at Florence, Araceli at Rome, and S. Petronio at Bologna, may also be cited. The Chapter-house of S. Lorenzo at Naples, contains a curious specimen of a window whose pattern is that of Pl. X. Fig. 12., but worked entirely with semi-circular arches.

Sometimes two circles are placed over two arches, as in the apse of the Frari, Venice; or an elliptical head has three pointed arches and two circles packed into it, as in the Town-hall, Perugia.

Plain Lancet windows sometimes occur, and are arranged in groups of three and four, as in our own Early English.

Tracery windows of the lancet proportion are great favorites with the Italians, but they often give them transoms. Pl. XI. Fig. 1., from the unfinished nave of Siena, presents characters essentially different from complete Gothic specimens. The mixture of round and pointed arches,

the dentil borders of the tracery, the decoration of the upper circle, the breadth of the transom and its ornaments, are all features peculiar to the Italian Gothic. Pl. XI. Fig. 4. has a quantity of tracery about the transom; and the lower part of Fig. 3., which I have been compelled to omit for want of room, would exhibit a similar arrangement. This figure represents half the head of a large rich window (from the Madonna dell Orto in Venice) consisting entirely of roll-tracery, its mouldings are shewn at *D*, *E*. Fig. 7., from the Cathedral, Perugia, is not uncommon even in the complete Gothic or Decorated style. Siena Cathedral, the triforium of Lucca, and the cloisters of the Campo Santo, Pisa, contain beautiful examples; the latter have been well published by Messrs Cresy and Taylor*.

Wheel windows are exceedingly prevalent in Italy; unfortunately the tracery is often removed: where it remains it consists of a number of radiating shafts, with capitals supporting arches, which are varied by making them either plain circular; as the central one in the west front of Spoleto (which is remarkable for having no less than eight wheel windows of different patterns,) or intersecting circular, as at Monza, S. Giovanni in Conca, Milan, and S. Corona, Vicenza; or trefoiled, as at S. Antonio Vecchio, Verona.

* Architecture of the Middle Ages at Pisa.

Sometimes a double rank of concentric arcades appears, as in an example at Perugia*, of which we have also a splendid instance in the south transept at York†.

Wheels occur mixed with the tracery and pannelling of the Italian Gothic, and they have twisted pillars and more rays than the earlier examples. One of them is shewn in Pl. XIII. at *B*, others may be seen at the Cathedral at Florence: S. Antonio at Padua, (Pl. XI. Fig. 2.) and S. Marc at Venice, exhibit magnificent wheels, and the heads of the great windows at the east end of S. Domenico, Perugia, and the north-west chapels of S. Petronio, Bologna, have circles with very peculiar foliation and tracery; the former is shewn in Pl. XI. Fig. 6.

There is a pretty circle in the front of Araceli at Rome; and that of S. Tommaso at Verona, is a curious specimen of mixture between the Gothic and Revived Classical styles.

In the north of Italy, where brick and terra-cotta are used, the windows have wide apertures of a single light, and pointed or round arches; their sides deep, and sloping outwards, are decorated with a profusion of mouldings in brick,

* Travellers should not forget to ascertain the name of the Saint, or some other descriptive mark of the example they select for memoranda.

† Vide No. 13. in the title page of Britton's Chronological History.

commonly consisting of a succession of alternate hollows and rounds, with fillets between; differing in that respect from the Early English groups of hollows and rounds, which run together without fillets. Sometimes the heads of the windows are foliated, and sometimes a little plain stone tracery is introduced, which in other cases is clumsily built of brick or terracotta. Dripstones of the common Gothic section are used, but bordered beneath with dentils, or with a row of small sunk pannels upon the space between the dripstone and window head; such pannel strings are occasionally introduced below the window, or carried all round it. Pl. III. Fig. 27. is a specimen from the windows of S. Stefano at Venice, but the patterns are very various. Pl. IV. Figs. 10, 11. are other pieces of terracotta work.

S. Pantaleone at Pavia, the chapels on the north side of the Cathedral at Parma, the south of Mantua, and at S. Eustorgio at Milan, the exterior of S. Antonio, Padua, the Foro dei Mercanti, Bologna, and the brick apse of S. Fermo Maggiore at Verona, are all good specimens of this kind of moulded brick-work.

Two single light windows often occupy one exterior compartment of these chapels, and have a circle above them, the whole arrangement assimilating itself to the common pattern, (Pl. x. Fig. 9.); but the three apertures being placed

too far apart to make one window: as in the transept end of S. Pantaleone, Pavia, and the side aisles of S. M. delle Grazie, at Milan, or as in the chapels of S. Petronio, Pl. VI., where two windows and a circle are so grouped, but each window is again filled with a similar arrangement.

Circular windows often occur bordered like those just described, with many mouldings and with concentric dripstones; sometimes the circle is circumscribed by a square, and the spandrel spaces so produced are filled with tracery, as at S. Marc, Milan.

CHAPTER VII.

VAULTING, AND PARTS DEPENDENT ON IT.

SECT. 1.—*General Arrangement and Form of Vaults.*

VAULTING was carried to great perfection by the Romans prior to the decline of the arts, and applied largely and successfully in the erection of the enormous and complicated structures of their baths, villas, piscinas, and theatres, of which such ample remains are to be seen in and near Rome, Naples, and elsewhere. In these we may reasonably expect to discover those architectural difficulties arising, the gradual overcoming of which brought the art of vaulting to its utmost perfection.

The great halls of the baths of Caracalla and Diocletian, and the Temple of Peace, are all arranged upon the same general scheme; and other examples of the same appear to have existed among the ruins of the Palatine Hill, and in the other Thermæ*. From those that remain, particulars may be gathered which will shew the origin of many members of Gothic vaulting; for the general arrangement of them resembles perfectly that of a Gothic church.

* Vide Palladio on the Baths.

Pl. I. Fig. 1. is an isometrical drawing of one of those halls, dissected so as to shew its internal structure. This is effected by supposing the end wall *a e b* to be removed, and a slice of the building cut away by making a vertical transverse section from *c* to the middle line *d*, which meets a portion of a longitudinal cut *fgde*. Besides this, the walls that closed up the arches *ch* and *hk* are removed, so that the internal arrangement is laid open, and at the same time its relation to the exterior is displayed. The plan of the parts removed is inserted in a darker colour, as at *caeb*. Of course minor details are omitted on so small a scale; and, as it is in these that the examples principally differ, their omission enables me to represent them all by this single figure.

This figure resembles, perhaps, more the Temple of Peace, than any other; because that was an isolated building: whereas the others were surrounded by halls, apartments and cloisters, which in some degree modified the lateral passages or side aisles.

The figure shews a central hall vaulted in three compartments of Roman vaulting; the vaults resting entirely, in the Decorative sense, on eight shafts of granite, each furnished with a capital, and a stump of entablature jutting out from the wall. Between these, three lofty arches on each side open into as many waggon-vaulted apartments, which, as they communicate with each other by

smaller archways, as at *m*, *n*, *o*, constitute side aisles; the partition walls act as real buttresses against the transverse strain of the great vault, and are assisted by projections at *p*, *q*, *r*, the progenitors of the flying buttress.

The inferior heights of the side aisles allow of *clerestory* windows, as *st*, *uv*; and the great side arches of the nave, which I may be allowed to call the pier-arches, have each a colonnade, whose entablature is placed about half their height from the ground, and probably sustained a gallery, which it requires no great stretch of fancy to call the *Triforium*. In the figure the central pier-arch has the colonnade omitted, and this is the case in some of the examples.

Who then can help seeing, in this building of classical times, that in the curious struggle between the arch and the entablature, the former has already got possession of the entire Mechanical construction, and nearly of the Decorative? for as the grand difference between the Classical principle and the Gothic is this, that in the first the shaft sustains horizontal loads, and in the latter vertical; so it is clear that, to all intents and purposes, the great granite shafts of the nave are sustaining the vertical weight of the vault, for the insignificant bit of entablature is not sufficient even to satisfy the eye.

This vertical principle is so strictly adhered to by the Middle Age architects, that when even

square-headed apertures are made use of, they do not allow the horizontal member to rest on the capitals, but turn down its extremities, and place them vertically on the shaft (as in Pl. IX. Fig. 17.) Some curious examples may be seen in the façade of S. Miniato at Florence, and in the attic of the Baptistery there, where antique marbles have been used, but the architrave mouldings, instead of resting horizontally on the pilasters, are mitred, and made to descend vertically on them, or else continued down like pannel mouldings to the base-line. The transoms of doorways are the only cases of departure from this principle.

The mechanical structure of this building shews that the Romans had recognised the principle so largely employed by the Middle-Age architects, of throwing the pressure of their vaults upon lines, and resisting these by transverse projecting walls or buttresses; between which they placed, windows above, and lower rooms below. But they also applied the same principle to their domes, which at first were portions of spheres of equal thickness in the horizontal section, and rested on cylindrical walls, but were afterwards brought into accordance with the latter system. Pl. I. Fig. 2. is an isometrical drawing, representing a half section and half plan of the Temple, commonly called of Venus, on the shore at Baia near Naples. The interior walls of this temple form a cylinder, and are

crowned with a dome, but this dome has eight vaulting cells which rise up into it, as the figure shews, and of course lighten it; at the same time serving to throw the pressure upon the intermediate portions or ribs, two of which are seen at *ab, bc*. Fig. 3. is a half plan of the upper story taken at the level of *de*; from which it appears that the external form of the building is octagon, and that its angles are further strengthened by pilasters, or pilaster strip buttresses, which receive the pressure of the dome-ribs, while the intermediate wall is safely pierced by windows, whose segmental heads are seen in Fig. 2. rising into the vaulting cells.

On the floor the cylinder is pierced at each diagonal, with a capacious semi-circular niche, which gives nearly as much space to the apartment as if it were square, and is ingeniously made to admit of lateral entrances, *fg, hi*. The building is of brick, and tolerably perfect in its essential parts; the dome of tufa, and partially ruined. Domical vaulting cells similar to these are also to be found in the apartment called *il Canopo*, at the Villa Adriana near Tivoli, in the Temple of the Sallustian Venus at Rome, and probably in other examples.

One of the most ingenious theories of the origin of the pointed arch, and the best supported by eminent names, is that which would derive its invention from the necessities of

vaulting. From the manner in which this has been stated we are led to infer, that the early Gothic architects, driven to the necessity of vaulting rectangles of which the length and breadth were different, with Roman quadripartite vaulting, hit upon this form of arch as the only mode of accomplishing it.

Much of the force of the argument depends upon two circumstances; first, that such rectangles were not vaulted with Roman vaulting till after the invention of the pointed arch; and next, that the pointing, or otherwise altering the form of the arch, is the only expedient then used for that purpose. I shall proceed to shew that neither of these assumptions will stand the test of examination.

Amongst the various forms of vaulted apartments, whose remains constitute so large a portion of the ruins of Roman magnificence, rectangles are of frequent occurrence, and these for the most part are covered with a waggon vault, or if a cross vault be required, it is managed as in Pl. II. Fig. 1., by making it of the same diameter as the longitudinal one, by which means a portion of the latter is necessarily left at each end of the room. This can scarcely be called a solution of our problem, which requires that the groins* of the parallelogram should spring from

* The lines which the surfaces of vaults form by their intersections, are either termed groins or ridges. They

its angles. But these conditions they found the means of satisfying, and in vaults on a very large scale too, even those of the great halls I have been describing. For example, the compartments of the nave of the baths of Caracalla, instead of being square, have their sides in the proportion of nine to eleven; those of the baths of Diocletian, now the church of S.M. degli Angeli, are as four to five (the span 67 feet), (excepting the central one, which is nearly square), and those of the Temple of Peace, in the same proportion as the last (with a span of 83 feet). The manner in which the difficulty is surmounted may be understood from the diagram, Pl. II. Fig 2., in which the proportions of the sides of the parallelogram are somewhat exaggerated to make the principle clearer.

This example is formed by the intersection of two semi-cylindrical vaults, each of which has the diameter of its respective side of the parallelogram, but in order to bring their vertices to the same level the smaller one is raised upon vertical stilts, *af*, *bg*, *ch*, *dk*; consequently the groins, instead of being situated in vertical planes upon the diagonals of the parallelogram, as in the common quadripartite vault, are curves

are *Groins* when the angle is external forming an *edge*; and *Ridges*, when it is internal or forms a *nook:* this distinction must be well understood.

of double curvature, and when projected on the plan, exhibit waving lines, *aec*, *bed*. It was the observation of this waving groin in the baths of Diocletian, that led me to the discovery of its origin. At first, I naturally attributed it to settlement; but a closer examination and comparison with the plan of the building led me to the truth, which, as far as I know, has hitherto escaped notice.

It must be observed that, in fact, both the larger and smaller vaults are raised above the entablature by stilting; but that the diameter of the smaller one is thrown considerably higher than that of the larger. This construction once understood, from an examination of the perfect vault of S. M. degli Angeli (the baths of Diocletian), the same will readily be detected in the great hall of the baths of Caracalla, where the mere springing of the vault remains; but this springing shews the excess of stilting in one direction above that of the other.

However, the twisting form of the groin is disagreeable to the eye, and renders it incapable of receiving a rib; so that it is no wonder that a new expedient was soon found to supersede it, which appears to be the domical or inclined form of the vaulting cells.

The whole difficulty of vaulting a parallelogram with quadripartite vaulting, resides in the assumed necessity of preserving the apex of the

vaulting cells horizontal, and making their surfaces cylindrical throughout. If we free ourselves from these conditions, it is easy to shew that we can not only vault any parallelogram or trapezium, but that we may make both arches and groin of any figure we choose.

For let *ABCD*, Pl. II. Fig. 3., be the parallelogram; and let there be set up on each of its sides an arch of any figure, having the diameter of each respectively, as *AaB*, *BeC*, *CcD*, *DdA*, and upon the diagonals *AC*, *BD*, other arches *AVC*, *BVD*, which must intersect at some point *V*.

Then, to complete the vault, we have only to cover each triangular portion *BaV*, *AaV*, *AdV*, &c. with a surface, which is always possible, however the curvature or inclination of their sides may differ; but the ridge-line of each cell, which may be curved or straight, will of course be more or less inclined according as the apex of the lateral arches is more or less below or above the intersection of the groin-ribs. In fact, this reasoning is entirely independent of the form of the arches, and bound only with the one condition, that the diagonal groins must intersect in some point, and therefore gives a complete solution of the problem with semi-circular arches only. Pointed arches might naturally be used instead of semi-circular ones after their discovery or introduction, and their convenience and strength would occasion them rapidly to supersede the

latter. But that there was no *necessity* for their employment is clear, because this expedient of forming domical cells was known to the Romanesque builders and used by them at Spires, and other examples of the same age*, before the pointed arch made its appearance. Nay, I am by no means certain that it was not employed earlier, for I have already shewn that domical cells are to be found at Baia in the Temple of Venus, and elsewhere, although I am unable to cite an example of them in a genuine Roman cross-vault.

However, we see that the problem of vaulting an unequally sided rectangle, so far from having first attracted the attention of the Middle Age architects, and required the pointed arch for its solution, had early presented itself to the Romans, who, beginning from the rude method, Fig. 1., were led to the discovery at least, of stilting the arches, if not to the other expedient of doming the cells. Again, the two latter methods, instead of being superseded by the use of pointed arches, continued in use to the latest period of the Gothic; but the former appears to have been the favourite on our side of the Alps, and the latter in Italy and, perhaps, in Germany, where the cells of the Early Gothic are often excessively domical.

* See Architectural Notes on German Churches, p. 19.

Pl. II. Fig. 4. is a common form of vault used for the naves of the French and English churches; where *AGD*, *BHC* are the transverse arches, and *AEB*, *DFC* the clerestory or longitudinal arches.

The latter are raised upon stilts, *Aa*, *Bb*, so as to throw their imposts considerably above those of the transverse arches, which are commonly at or near the level of the clerestory string, while the archway *AaEbB** contains the whole clerestory, and in French examples has a rib whose shafts descend to the ground with the other vaulting shafts, but whose capitals are at *ab*, above those of the latter at *AB*. As to the ridges, they are either horizontal or slightly inclined upwards or downwards.

In Italy, the parallelogram is vaulted as in Fig. 3., where similar arches without stilts spring from the same level, and the different heights of their vertices is compensated for by excessive doming of the cells.

But there even in square compartments this expedient is resorted to, and the vault, were the diagonal ribs stripped off, would assume the form of Fig. 7., where the sides of the contiguous cells are in the same plane as *NfVh*, and there is only a slight *ridge* at the lower angle

* Called the vaulting escutcheon, in the Architectural Notes.

of each (as *Mk*), whereas, if the diagonal ribs were stripped off the common quadripartite vault, it would exhibit a marked *groin* from each of the four lower points to the vertex; the ribs therefore of such a vault as Fig. 7. are mere surface ribs.

Fig. 5. is one compartment of the vault of the nave at the Certosa, Pavia; and Fig. 6., that of the side aisles. They are given as examples of Italian sexpartite and quinquipartite vaulting*. It will be seen that in Fig. 5. all the arches are pointed, except the central transverse rib *EVF*, which is semi-circular and stilted.

* The invention of these convenient terms is due to the author of the Architectural Notes on German Churches, and employed to designate the species of that large class of vaults which consist of a number of cells diverging from a common intersection of diagonal and other groin-ribs. These vaults are called quadripartite, sexpartite, octopartite, and so on, according to the number of such cells. Thus, Pl. II. Figs. 1, 2, 3, 4. are all examples of quadripartite vaults, since each consists of four cells whose apices meet in one point, *V*. Fig. 6. is quinquipartite; Fig. 5. sexpartite.

Many cases, however, occur, in which vaulting cells enter a principal vault at a point below its vertex. Thus, Fig. 8. is a kind of dome with four vaulting cells of this kind, whose ridges intersect it at four separate points, *D*, *E*, *F*, *G*, considerably distant from the vertex *V*; such cells are termed Welsh vaulting cells. Often too, a waggon vault covers the nave of a church and has lateral Welsh cells, but the whole is dressed up by means of surface ribs till it assumes a totally different appearance. The nave of Winchester appears from engravings to be of this class, but is, perhaps, not strictly so. (Vide Britton, Winchester Cathedral.)

In Fig. 6., *acb* is the circular pier-arch which opens below the two pointed arches *AaF*, *FbB*, of Fig. 5. The semi-cross rib *dV* is a portion of a circular stilted arch, and all the other arches are pointed. Both vaults are excessively domical, and the whole is an example of the mixture of pointed and round arches, which never seems to have offended the eye of an Italian.

Sect. 2.—*Ribs.*

Of projecting groin-ribs or diagonal ribs, there is not the least trace in Roman buildings, and they seem to make their first appearance in the Romanesque, probably of the Rhine; the germ of the transverse ribs may however be found in the "arcs doubleaux" of the Roman vault.

The vast covered cisterns of the Romans may serve to shew how they set to work, when a mere stone roof, destitute of ornament, was required. The plan of the Piscina Mirabile, near Baia, is a parallelogram of 216 feet by 85. This area is divided into five aisles by ranks of twelve piers each, sustaining a roof of light tufa, in the manner shewn by Pl. v. Fig. 5., which represents a portion of this structure; the side walls and surrounding rock being removed in the figure, for in fact it is erected in an excavation of the soil.

The piers of each rank, *AA*, *BB*, *C*, *D*, &c. sustain arcades terminating upwards in parallel

walls, which divide the area into five aisles; upon the tops of these walls rest waggon vaults, which constitute the roof. Their spandrils are filled up, and the whole upper surface is formed into a platform. But the point to which I wish particularly to direct attention in this place, is the range of sub-arches *ab*, *ab*, which fortify the vault and descend down the face of the pier to the ground, so that the plan of the pier is an equal armed cross, and it becomes a real compound pier of four members sustaining longitudinal and transverse arches.

And it must be remarked, that these sub-arches are genuine ribs, strengthening and sustaining the vault, which is of tufa, while they are strongly built of brick or stone*.

A smaller piscina of similar construction may be seen near the Laberinto at Pozzuoli; that called the Cento Camerelle at Bacoli, and others near Castel Gandolfo, and Albano, are roofed on nearly the same plan, but want the sub-arches; consequently the piers are plain parallelograms on the plan.

* As the vault is my only object, I pass over other particulars of this piscina, most of which may be found in the common antiquarian descriptions, such as the variation in the form of the vault which occurs at each end for the sake of admitting light, the curious buttressing vaults along one side, the arrangements at the impost of the pier, and the contrivances for cleansing and draining the reservoir; all of which are well worthy of attention.

The Piscina at the villa Cardito near Pozzuoli, on the other hand presents the simplest possible form of Roman vaulting; it is represented in Fig. 4., and is probably the most ancient of them all. Square piers sustain a double set of waggon vaults, which crossing each other at right angles and at the same level produce groined compartments.

In the Colosseum, and in the enormous groined vaults of the baths, it is common to find a kind of tile-ribs or bands introduced, both upon the groin itself and upon the surface of the vaults, but these do not project, and therefore are entirely hidden by the decorative covering. The lateral apartments of the baths of Diocletian, now used as granaries and conventual buildings, retain some very complete vaults of this kind.

These examples are sufficient to shew that the Romans were beginning to use ribs, and that these had assumed a place in the Decorative construction. The step from the vaulting system of the Piscina Mirabile (Fig. 5.) to that of the nave of the Romanesque Cathedral of Valence (Fig. 2.) is but small.

In the Decorative construction of a Gothic vault, the ribs assume the principal part in the support of the roof; they alone are sustained by the shafts, and the vault lies upon them unobtrusively, as a mere sheet or surface. The *groins* of the vault are always covered with ribs, and

very often the *ridges* also (vide Note at page 72.) while other ribs are occasionally applied to the plain *surfaces* of the vaulting cells. These three classes of ribs may be designated as Groin Ribs, Ridge Ribs, and Surface Ribs respectively.

Many vaults that have great appearance of complication, from the multiplicity of ribs and their intersections, prove very simple when considered apart from the ribs; whilst other complex vaults would present as many faces or surfaces, were the ribs stripped off, as they appear to do with the ribs on. It is sometimes difficult to discover from below, whether a groin exists under a rib or not; that is, whether the adjacent vaulting surfaces are, or are not in the same plane; but by viewing the vault from various spots, and duly allowing for the effect of perspective, it may generally be made out.

The ribs which bound any compartment *ABCD*, Pl. II. Fig. 4. are called *transverse* or *longitudinal*, according as they cross the longer dimension of the room, or lie parallel to it; or if the compartment be bounded by a wall as in the case of the clerestory, the rib which is placed at the intersection of the vault with the wall may be called the *Wall Rib*, and its profile is very commonly an exact half of the other ribs applied against the wall; but in early Gothic specimens, and generally in Italy is a mere pannel edge, which may be seen at *l*, Pl. IV. Fig. 1. and in Pl. VI. and VII.

The names which the ancient French architects gave to these ribs have been preserved, and serve to shew that the different parts of Gothic architecture were well defined, during the existence of that style*.

In the Early vaulting of England, there are abundant examples of surface ribs on a plain Roman quadripartite vault. Generally one is interposed between each wall rib and the diagonal†. This appears to be the first step towards fan vaulting, the second is taken by making a slight groin behind each of these added ribs, and the next by making the angles of all the groins equal. I am inclined to think that the merit of all this will be found to belong to the English architects, as our specimens of surface rib vaulting are abundant, at a time when the continental architects confined themselves to plain quadripartite vaults, with diagonal and transverse ribs alone.

Some good intricate vaulting is to be found in the After Gothic of France, the favourite form being that of Pl. II. Fig. 8. which is nearly the same as many English specimens. In the French

* The ridge ribs are *liernes;* the diagonal, *ogives* or *croisseé d'ogives;* wall-ribs, *formerets;* transverse ribs, *nervures;* and intermediate ribs not included in these definitions as *Ak*, *Am*, Pl. II. Fig. 8. *tiercerons* or *tiercerets;* subarches are *arcs doubleaux.* Vide Ware, p. 56, or de Lassaux, Journal of R. I. Feb. 1831, p. 235.

† The diagonal rib is that which occupies the groin of a quadripartite vault, and therefore the diagonal of its plan.

vault however the ridge rib is confined to the central dome, as at *EVF*, *DVG*, while the ridges of the cells are ribless. In the corresponding English vault, the ridge rib commonly extends to the walls or bounding arches, and the vault is not domical. But these are confined to chapels in France, and never appear in the main building, except occasionally over the crossing compartment as at Orleans Cathedral.

Curious Flamboyant specimens may be found in chapels annexed to Ainay church near Lyons, Lyons Cathedral, and N. Dame at Avignon. The roof of S. Nizier at Lyons, which is a common quadripartite vault, is overlaid with surface ribs formed into a kind of tracery.

Some of these vaults which present a great appearance of intricacy, assume regular geometrical figures when projected on the plan. Thus Pl. II. Fig. 9. a favourite vault in the After Gothic of Germany, is on the plan an assemblage of lozenges formed into stars, which radiate both from the vaulting shafts, and from the centre of the vaulting compartment; but in its actual appearance is an elegant and peculiar kind of fan vaulting. Vaults on this principle, and with a much greater repetition of parts are commonly to be met with in the German churches, I suspect most of them are of wood and plaster, and in many of them the ribs are only surface ribs laid on to a waggon vault with Welsh vaulting

cells*, exhibiting examples of very simple vaults converted by surface ribs into very intricate ones. I would call this class of decorative vaults *Stellar vaults*, from the regular stellate form they assume on the plan.

The principal distinction between these and our own fan vaulting, is the substitution of lozenge-headed compartments in the fans for the English horizontal transom rib. We have also lozenge-headed compartments in our Early vaulting, but they are never so symmetrically arranged in stars throughout.

Besides these *Stellar vaults*, other intricate ones may be found at Munich Cathedral, the Frauenkirch, Frankfort, &c. of a kind totally differing from our elegant English specimens, and in which the architect, forsaking grace and beauty, has degenerated into that fancy for producing difficult specimens of stone cutting at the expence of architectural consistency, which is so much the character of the German After Gothic. In these the vaulting ribs are not placed symmetrically, and the vaulting cells are often oblique; Pl. II. Fig. 11. the plan of one of these vaults may serve as an example, but it would require as many figures as there are specimens to describe all these vagaries, which after all is not the main object of my Essay.

* Vide Note at p. 78.

Complex Rib Vaulting is not to be found in Italy, where the greater part of the vaults resemble Pl. II. Figs. 3. 7. with diagonal ribs; at least the only exception I know of is the crossing compartment of the church of the Trinita del Monte at Rome, which retains an elegant rib vault, like Fig. 8.; the rest of the church having been transformed. This is probably the vault alluded to by Sir James Hall, who says that the stones of which it was composed were brought ready hewn from France, by Francis the First*.

SECT. 3.—*Vaulting Systems and Piers.*

Vaulting ribs may either rest each on their own shaft or corbel, or the whole group of them may rest on a single shaft; or when there are many, as in fan vaulting, they may be formed into three or more parcels with a shaft or corbel to each parcel.

A complete compound pier† must be provided not only with a set of vaulting shafts on each face for the nave and side aisle, but with other shafts on its sides for the pier arches, which are often compound arches of two or more orders.

Pl. v. Fig. 1. is a sketch of the arrangement

* Essay on Gothic Architecture, p. 8.

† My compound pier is what is usually termed a clustered pier. Vide p. 24. *Pier arches* are those which divide one aisle from another, *aisle* being used for the nave or other central alley, as well as for the lateral ones. Vide Architectural Notes, p. 11.

of vaulting shafts, &c. in St Pierre, Geneva, representing merely the pier and parts above it to the roof, without the triforium and clerestory. Here *T* is the transverse rib, *tt* its shaft, *DD* the diagonal ribs; *dd*, *dd* their shafts.

The pier arches are composed of two orders *EE*, *SS*, and have edge shafts *ee*, and subshafts *ss*; *ff* is the clerestory string, and *gg* the triforium string. The clerestory and triforium presenting nothing extraordinary, are omitted to avoid confusion.

Pl. III. Fig. 23. shews the plan of the pier, in which the dotted lines radiating from the shafts are the plans of their respective ribs, and the small section placed on each rib is the profile of its moulding. Thus *mpn* is the section of the pier arch. The shafts are marked with the same letters as in Pl. V. The pier consists of twelve parts or shafts, namely, three on each face for the vaulting of the nave and side aisles respectively, and three on each side for the pier arches.

This sketch contains all the parts that I would include under the term *vaulting system*, by which I mean the scheme of connection between the ribs and the parts that sustain them, the shafts, piers, and pier arches.

The figure therefore shews the vaulting system of the nave; the vaulting system of the side aisles would require another figure. As the pier arches are always of the same height as the

transverse arches of the side aisles, the vaulting system of the latter is much simpler than that of the nave, where the shafts may spring from various heights and in various manners.

I have taken this example previously to entering upon the simpler arrangements of the Italian, because it is one that frequently occurs in the Norman churches of the Continent, and appears in a form more familiar to most of my readers. Before I proceed to Italian piers, however, I shall describe a construction of flat-roofed churches, which, for aught I know, is confined to the Romanesque of Italy.

In this method, the columns and pier arches sustain a lofty wall with clerestory windows, as in the great Basilicas of the Christian Roman style; but in addition to these, two or more transverse walls are carried across the entire body of the church, spanning the nave and side aisles by means of arches, and giving bond and buttressing to the whole structure, which is greatly deficient in the Basilicas.

Pl. 1. Fig. 4. is an isometrical sketch of one of the best preserved of these churches, S. Miniato, near Florence. In this diagram I have supposed the wooden roof to be removed both from the nave and side aisles, and the side wall of the latter to be taken down, so that the construction of the walling is laid open The pier arches rest on bearing shafts except at the places where

the cross walls intersect, and there the pier is a compound group of four half shafts, three of which have their capitals at the same height, and the fourth which faces the nave is much higher.

Similar transverse arch-walls exist at S. Zeno, Verona, with a wooden roof*; but they may be found in churches which have since had vaulting added, and a knowledge of the perfect examples is useful in detecting the original plan of such altered ones, and serves as a key to some arrangements of the compound piers which would otherwise be unintelligible.

The Cathedral at Modena is a case in point. This was evidently at first a cross wall church, with a wooden roof like S. Miniato; the piers are alternately bearing shafts and compound piers, the cross walls are manifest in the side aisles, and have triforium apertures in them; the arches that cross the nave as well as the pier arches and side aisle arches are of two orders, and the pier has a provision for them all, but none for the diagonal ribs.

That the vault is a subsequent addition is plain from the awkward way in which it interferes with the clerestory windows, and there being no provision for the diagonal ribs, corbels

* A small chapel at Capo di Bove, about a mile outside porta S. Sebastiano, Rome, figured by Agincourt, has the roof entirely sustained by a series of pointed arches resting on corbels, and entirely superseding the usual trusses.

are placed for their reception. I believe that the invention of corbels for the support of vaulting ribs, is due to cases of this kind, in which the vaulting system has been altered from that which the original piers were planned for.

Thus it is not unusual to find both transverse and diagonal ribs placed either immediately on corbels, or on short shafts which rest on corbels. S. Sofia at Padova, and S. Remigio, at Florence, are cases in which this subsequent addition is manifest*.

The pier arch of the Romanesque, is always a compound arch of two orders of square edged arches; the second order resting on a semicylindrical sub-shaft, applied against the side of the square edged pier which sustains the arch of the first order, as at *fg* (Pl. IV. Fig. 1).

The simplest pier that results from this, is a square with half shafts on each face. Pl. III. Fig. 20. This is one of the commonest piers of the Romanesque, but is scarcely to be found in Norman examples. In the South of France it occurs at Valence, La Charité, and Nantua; in Italy at S. Michele, Pavia, S. Stefano, Bologna, Parma Cathedral; S. M. Novella at Florence, Siena Cathedral, and S. M. sopra Minerva, Rome; but it is employed in different ways.

* The most clumsy case of added shafts that I know of, is S. George, at Cologne, when the transverse pier descends in the centre of a pier arch, dividing it into two.

Pl. v. Fig. 2, the nave of Valence is an excellent example, because it certainly retains its original form, and shews the early use of the parts of this pier. Here the square body of the pier sustains the pier arches, while its lateral half shafts are appropriated to the sub-arches, and those on its face to the transverse ribs of the waggon vault.

A similar distribution occurs in the nave at La Charité, which has pointed arches. The same pier alternates with a more complex one at S. Michele, Pavia, and bears the same relation to the pier arches; but as the vaulting is not original, it is not easy to say how the front shaft was to have been disposed of. It is also the alternate pier of Parma, and the arrangements of both these naves would agree very well with sexpartite vaulting, for which the piers were probably designed.

Sexpartite vaulting it must be observed, requires the piers to be alternately provided with three vaulting shafts and with one, thus in Pl. II. Fig. 5, (supposing the series of vaults to be carried on) it is plain that at *A* and *B*, there is a transverse rib between two diagonal ones, as in a common quadripartite vault; but at the intermediate point *F*, there is only the transverse rib. Hence the piers below *A* and *B* must have three vaulting shafts, but that below *F* but one, and this peculiar arrangement is not re-

quired for any other description of vault. Whenever it occurs therefore, we may fairly conclude that sexpartite vaulting was originally designed, whatever may have been executed; for quadripartite vaults are often substituted, and then the diagonal ribs are carried by corbels over the intermediate shafts *F*. To the examples above cited, may be added the nave of the Cathedral at Ulm, begun in 1337, with sexpartite piers; and the vault not added till 1479, and quadripartite.

On the other hand, a sexpartite vault is placed on quadripartite piers at the Certosa, Pavia (Pl. II. Fig. 5). For there the points *A* and *B* alone are sustained on their piers, and *F* rests on a corbel above the apex of the wide pier arch.

In the later examples of S. M. Novella, Siena Cathedral, and S. M. sopra Minerva, the parts of the pier (Pl. III. Fig. 20.) are distributed thus; the lateral half shafts support the nave arches which are of a single order, and the edges of the pier are carried up to the clerestory like a pilaster with the front half shaft on its face. This shaft carries the transverse rib, and the edges serve for the diagonal ribs.

In the Cathedral at Modena and S. Zeno, Verona, the transverse arches as well as the pier arches have sub-arches, and as these churches are built on the cross-wall system already explained,

(vide Pl. I. Fig. 4.) there are no diagonal shafts*; hence, we get the pier Pl. III. Fig. 21.

By adding small diagonal shafts to the last pier, we form one which is actually that of the Cathedral at Trent. (Pl. III. Fig. 22.) Here the transverse and pier arches are similar, resembling *fg*, Pl. IV. Fig. 1. but this is not common; transverse arches being of a single order in general.

Diagonal shafts occur however in early Romanesque examples, as on the side aisle face of the principal pier of S. Michele, Pavia, and in the Romanesque chapel on the west hill at Sion in the Valais†, also in the pier of the court in front of S. Ambrogio, at Milan.

In the nave of S. Ambrogio, Pl. IV. Fig. 1. there are diagonal shafts *k*, supporting square edged ribs; but I have some doubts that they may have been added as well as the shaft *m*, which carries the pointed transverse arch.

These early piers are varied by using pilasters instead of half shafts for the transverse arches as at S. Eustorgio, Milan; S. Michele,

* It is convenient to call the vaulting shafts by the names of the ribs they carry; thus diagonal shafts, transverse shafts, are those that support the diagonal and transverse ribs respectively.

† This is a curious example, and there appears to be another worth examining between Sion and Martigny, but nearer the former.

Pavia; and a few at Parma*; and sometimes the sub-pier-arch rests on a pilaster instead of a half shaft, as at *abc*, Pl. IV. Fig. 2.

Sometimes a pier occurs, made up of four half columns, so as to have the shape of a quatrefoil upon the plan; there is one at S. Ambrogio, and the same pier may be found in the Rhenish Romanesque, and even in the Norman, as at St Peter's, Northampton.

At the Cathedral at Arezzo, the pier is cruciform with chamfered edges, and large diagonal shafts occupying the nooks of the cross, and there is a somewhat similar one at Parma.

In all these Italian piers, there is a character of simplicity and squareness that effectually distinguishes them from the Late Norman, and Early English, in which a greater abundance of small shafts were introduced. One cause of this difference is to be found in the transverse arches of the nave, which in Italy to the last were made of nearly the same breadth and consequence as the pier arches, (Vide Pl. VI., VII.) instead of being reduced to ribs of little more importance than the diagonal ones, as with us. This is most remarkable in the favourite pier of the Italian Gothic, the impost of which appears at Pl. III. Fig. 13., and the plan at Fig. 13. *b*. This with slight variation occurs at the Cathedrals of

* There are a great number of different piers in the nave at Parma.

Florence and Lucca, and S. Martino, Bologna; at Orsan Michele, and the Loggia de' Lanzi at Florence, and the two chapels of the Certosa in its neighbourhood.

The simplicity of this pier (a mere cross with octagon shafts in its nooks) is due to the plainness of the transverse and pier arches which in this style are of a single order each; in the three last examples the side aisles are of the same height as the nave, but in the former the nave is high, with clerestory windows as usual, the manner in which the vaulting system is managed, may be understood from Pl. VI. which shews one compartment of the nave of S. Petronio, Bologna; in which the pier differs from the above cited examples only in having the edges of its pilaster faces chamfered, and the diagonal shafts cylindrical instead of octagon.

It will be observed, that at the springing of the pier arches, a capital encircles the pier forming a banded impost, through which the front pilaster and the diagonal shafts pass and rise to the clerestory, where another capital is placed as an impost for the vaulting ribs.

The Cathedral at Verona, S. Pantaleone, and the Certosa at Pavia, have a pier like Pl. III. Fig. 22. although late examples; the first has a flat fillet on the front of each half shaft.

The pier at Milan is different from any other in Italy, and consists of eight nearly equal ogee ribs disposed circularly, five of which

serve for the pier arches and side aisle ribs, while three run up to the roof of the nave for the vaulting ribs. The series of niches which surround the pier, form a banded impost; and the whole, although different in details from any other Italian Gothic specimen yet cited, is, as will be seen, the same in principle as them all: indeed it is worth observing that the characteristic differences between the style of this Cathedral, and the Cisalpine Gothic, which have been so ably seized upon by the Author of the Architectural Notes*; but represented as errors, detracting from the merit of the building considered as belonging to the latter style; are in reality the properties of a whole group of buildings, the Italian Gothic; while the faults of Milan are rather derived from the mixture of Gothic decoration; which, while it appears to give it a claim to be admitted amongst Gothic specimens, really injures the effect by its want of harmony with the Italian arrangement.

A great number of churches in Italy, instead of compound piers have plain shafts, cylindrical or octagon, to sustain the pier arches. The use of these is of course derived from the Roman Basilican churches, and when the roof is flat, no arrangement is required for vaulting shafts. In the older examples, shafts, commonly borrowed from the classical ruins and of a single piece,

* Page xix.

are made use of, as in the Cathedral at Pisa, S. Alessandro at Fiesole, and many others; but when these were wanting, built shafts were constructed in imitation of them, as at S. Apostoli at Florence, and the Cathedral at Fiesole.*

When vaulting ribs are to be provided for, a pilaster rises from the capital of the pier shaft, and is flanked by small shafts for the diagonal ribs. This arrangement is shewn in Pl. VII. in the nave of the church of the Frari at Venice; and as far as the portion above the abacus of the pier is concerned, is precisely similar to that of S. Petronio, Pl. VI.

Other examples are S. Giovanni and Paolo at Venice, and S. Anastasia at Verona, differing from the Frari only in having the diagonal shafts somewhat smaller than their ribs; also S. M. Maggiore, Florence, in which the pier is square.

Sometimes, however, the diagonal ribs are stopped by corbels near their imposts, and only the pilaster allowed to descend to the abacus of the pier, as at S. Remigio at Florence, S.

* S. Lorenzo at Genoa, has an arcade of pointed pier arches on bearing shafts, surmounted by another of circular arches of two orders, resting on piers and bearing shafts alternately; the piers having sub-shafts and edge-shafts. This upper arcade is open to the side aisles, and its apertures correspond to those of the pier arches; the whole looks like the work of French architects, neither the mouldings or the management of the shafts resembling the Italian style.

Giovanni in Monte at Bologna, S. Corona at Vicenza, and S. M. delle Grazie at Milan.

To return to the more complete vaulting systems of our own side of the Alps. In the specimen Pl. v. Fig. 1. there are but three nave vaulting shafts; their number may be augmented in two ways.

The transverse rib of the nave may be a compound arch of two orders, and so require three shafts instead of one. This gives a group of five vaulting shafts in front of the pier, as at Strasbourg.

The longitudinal rib of the vault, or clerestory wall-rib, may have a shaft descending to the ground, and this also will give five shafts, and is the arrangement of the Cathedral at Rouen.

Variations may be made by causing any or all of these shafts to stop short of the ground, by resting on corbels, or on the clerestory or triforium strings. Thus, at Strasbourg, seven shafts in fact descend from the vault, of which two are from the wall-rib, two from the diagonal-rib, and three from the compound transverse arch; but of these the five central ones alone reach the ground, as the wall-shafts are stopped upon the triforium string.

A large class of churches is to be found, in which the vaulting shafts are all stopped before they reach the ground, and in which the piers are simple cylinders or octagons, upon whose

abacuses the pier arches rest. These pier arches may be compound arches, and indeed generally are of two orders; the bases of the vaulting shafts either rest on the ledge of the abacus, or upon corbels or strings above. Another class nearly allied to this, is one in which the pier is compound, but all its parts relate to the pier arches alone.

There is a marked difference between the vaulting systems of one country and another, which makes it essentially necessary to enter minutely into the analysis of their parts. Thus, the vaulting shafts in England are so rarely allowed to descend to the ground, that the cases when it does occur may be called exceptions only; whereas, on the continent they generally do so descend.*

The Norman churches of England have for the most part plain cylindrical piers, but when they have compound piers their parts rarely exhibit connection with the vaulting shafts, but merely with the pier arches. The Early English churches in like manner have rich pier arches, generally consisting of three orders, with sub, edge, and face-shafts, as at Ely, or, if of more, their shafts and arches arrange themselves into three groups of the same kind, as

* English cases of shafts to the ground, are Norwich, (sexpartite arrangement) Romsey, Binham, and Ely, all Norman; also Lichfield, and Worcester.

at Exeter; and the vaulting shafts (generally three) either rest on rich corbels in the spandrils of the pier arches, as at Lincoln, or are stopped higher up; whereas in the contemporaneous churches of the Continent, the vaulting shafts either descend to the ground, or have bases which rest on the abacus of the pier.

Of the superior effect of the English arrangement over the last mentioned one there can be no doubt. A corbel may always be proportioned to the weight or projection of that which it supports, and on the other hand, the weight sustained by a shaft should always appear to rest on its axis. Hence, when a single large pier or shaft is employed to sustain pier arches, a disagreeable effect of intrusion is produced by the appearance of a group of small bases, shelved as it were, upon the edge of the abacus; and even when this is softened by the employment of an applied half column to carry them, there still remains the barbarism of one shaft sustaining three or more smaller ones*.

The clerestory wall-rib is a very prominent feature in the French, and in some Netherland churches, where it always has a capital and

* The Norman south transept of Peterborough, Trinity Chapel, Canterbury, and Malmsbury Abbey Church; also the Early English round Temple Church, London, are English examples of this aukward practice, fortunately rare with us.

shaft, the capital being greatly above the level of the vaulting capitals. The base varies its position in different examples, resting on the abacus of the vaulting shafts at Paris and Sens, on the clerestory string at Auxerre and Dijon; on the triforium string at Amiens, Strasbourg, and Bayeux; on the abacus of the pier capital at Rheims and Chartres, and in Nôtre Dame and the Cathedral at Malines, and N. D. des Victoires at Brussels; or finally, on the ground, as at S. Ouen, and the Cathedral at Rouen, but always forming as far as it goes, one of the group of vaulting shafts; and even when continuous arches are used, this rib is still prominent; thus at Orleans, it rises from the ground with the vaulting ribs.

In the English vaults (excepting York and Gloucester) this rib is not treated as a separate member; the vault either abuts against the wall without any moulding to cover the intersection; or the rib, if there be one, is included in the general group of vaulting ribs, and rests with them on one capital.

Sometimes the architect took a fancy to introduce specimens of several kinds of vaulting systems and vaults in the same building; thus, at Lausanne Cathedral, each alternate pier resembles that of Pl. III. Fig. 23. But of the interposed ones, the first has coupled columns for the pier arch, and a lateral sub-shaft for its sub-arch; the next,

a single round shaft for the pier arch, and a stout detached shaft in front of it, which, running up to the roof, carries the three vaulting ribs in group upon a round abacus; the next, with a similar arrangement for the pier arch, has a slender shaft in front, supporting the single rib of a sexpartite vault, of which this is the only compartment, the rest of the nave having quadripartite vaults.

A similar whim occurs at Auxerre, whose piers carry a common groined roof, and exhibit in succession the vaulting systems of Dijon, of Amiens and of Strasbourg, slightly varied from each. Parma too has a great variety of piers, but does not retain the original vault.

In the Netherlands there are a great number of large churches which have a singular identity of appearance in the interior, and at the same time a manifest peculiarity of character. This appears to be due to the employment of plain well-proportioned cylindrical shafts for their piers; the style in other respects being an elegant Gothic. The principal examples are Nôtre Dame and the Cathedral at Malines, S. Paul at Liege, N. D. des Victoires, La Chapelle, and S. Gudule at Brussels; S. Jacques and the Dominicans at Antwerp; S. Michel at Gand, and Vournes, near Bruges.

Their pier arches have well defined sub-arches, variously moulded; they have large clerestory windows, with exquisite tracery; and most of

them a triforium, which in Malines Cathedral, N. D. des Victoires, and the nave of S. Gudule, is formed out of the lower pannels of the clerestory windows; and in La Chapelle, S. Jacques and the Dominicans, is a separate balcony under each window. A group of either three or five vaulting shafts rises from the abacus of the pier in most of them, and these have continuous imposts in Malines Cathedral, La Chapelle, and N. D. des Victoires.

These observations on local arrangements have no pretensions beyond that of detached notes, which may serve to direct attention towards a class of observations possessing considerable curiosity and importance in architectural history, but which have been too much neglected. I believe that similar peculiarities will be found eventually to characterise the practice not only of nations, but of districts and provinces.

Most of those that I have mentioned are not influenced by the variation of style in each country, but seem to have pervaded many successive styles. Thus the practice of stopping the vaulting shafts before they reach the ground, is as characteristic of English Norman as of Early English; and the cylindrical piers of the Netherlands are found in churches of many different ages; while, oddly enough, they seem as prevalent in the Venetian territory. The nave of the Frari, Pl. VII. for example, has them.

In making architectural notes, the plan of a pier should always be accompanied with indications of the distribution of its parts to the vaulting ribs and arches which it carries. The mere plan of the pier by itself conveys but small information, for it often happens that the identical pier may be distributed in many different ways, and that these differences constitute the only characters that distinguish the practice of one age or country from another, as I have already exemplified. Pl. III. Fig. 23. shews one way in which the plan alone may be made to convey these particulars. The dotted lines, drawn from the respective members of the pier, mark the direction of the ribs and arches, and upon each of these, at a small distance from the pier, are placed vertical sections of these ribs, as at *mpn*, *D* and *T*.

But it is sometimes desirable to shew also the figure that these ribs assume immediately above the abacus; because, when richly moulded ribs are employed, some of those mouldings, as I have already stated*, are got rid of in various ways before they reach the impost. As piers have, generally, the two sides alike, one half of the plan of the pier may be taken above the impost, and the other half below, as in Pl. III. Fig. 12. *a*, which belongs to the impost of which Fig. 12. is the perspective sketch; the left

* Vide page 32.

half of the plan is taken above, and the right half below the capital. But in very complex cases, such perspective sketches as are shewn in this plate should be made.

Sect. 4. *Pier Archways**.

The pier arches of the Christian Roman, Pisan, Byzantine, and Italian Gothic styles, are of one order, and either quite plain or decorated with face and edge mouldings.

In the first style, for example, those of S. Paolo, S. Prassede, S. Lorenzo, and S. M. in Cosmedin at Rome, are perfectly plain, and probably others that have been since plastered were so once. On the other hand, S. Apostoli at Florence has architrave mouldings, as well as S. Alessandro at Fiesole; and S. Miniato has the architrave mouldings in relief on the arches nearest the apse, and painted in all the others. In the churches of Pisa, Lucca and Genoa, (except S. Lorenzo,) and in the early ones at Florence, as S. Trinita, S. Remigio, S. M. Maggiore, S. M. Novella, and S. Croce, the arches are plain, as they are in S. Eustorgio and S. M. delle Grazie at Milan, S. Sofia at Padua, and S. M. sopra Minerva at Rome. But in the Italian Gothic they have mouldings on their edges, and others on their face forming a kind of dripstone, which leaves a parallel surface between

* Vide Note at page 86.

itself and the edge, which is commonly flat like the fascia of an architrave, but is sometimes hollowed, as at S. Stefano and the Frari at Venice. The edge mouldings are mere chamfers at the Loggia dei Lanzi at Florence, S. Petronio, and S. Giovanni in Monte at Bologna. At the Certosa near Pavia, they resemble *b*, Pl. XIV. Fig. Q. and in the Venetian district are uniformly edge-beads, as in the Cathedral, and S. Anastasia at Verona, S. Giov. and Paolo, the Frari, and S. Stefano at Venice, in some of which they are carved into ropes.

The dripstone moulding at Florence is seen in *l*, Pl. III. Fig. 26., accompanying a chamfered arch, as it does at the Loggia dei Lanzi, and is similarly applied to a square-edged one at Orsan Michele.

In the Venetian territory this dripstone is always ornamented with the peculiar ornament of which a small piece drawn to a large scale is shewn at Pl. VIII. Fig. 40., and its application may be seen in Pl. VII. In the nave of this example (the Frari) it is used alone, as it is at the Cathedral and S. Anastasia at Verona, and S. Stefano at Venice, but is often accompanied by other mouldings, such as that of *d* or *f*, Pl. III. Fig. 25., both of which occur in S. Giovanni and Paolo at Venice.

In the various Romanesque or Barbarian styles, the pier arch is, on the contrary, generally of two orders, each square edged, as in Pl. V.

Fig. 2., Pl. IV. Figs. 1, 2., and in the section *cd*, Pl. III. Fig. 22. It appears thus in the Cathedrals of Parma, Trent, Modena, Genoa, Valence, La Charité, and perhaps at Siena, which has been tampered with; also in S. Michele at Pavia, S. Ambrogio at Milan, S. Zeno at Verona, and the Vecchio Pieve at Arezzo, in Nôtre Dame at Avignon, and Mont Majour at Arles.

In their Early periods this form of pier arch continues with the addition of edge mouldings, which are either alike or different in the two orders. Thus at Geneva, Pl. III. Fig. 23. *mpn* is the section of the pier arch, which differs from *ab*, Fig. 22. only in having edge-beads *mn* applied to the first order, and chamfers to the second *p*. Bolder mouldings were afterwards used, such as *b* in Fig. 19., and these sometimes occupy so much of the edge as at first sight to confuse the orders; but it will be found that they reduce themselves to this rule with singular uniformity, and rarely exceed two in number on the Continent.

The Normans, to be sure, increased the orders of their pier-arches to three in many cases, and this is the favorite number in our Early English; but in our smaller country churches, the favorite pier-arch is still of two orders, with chamfered edges resting on a bearing shaft.

It is not my intention here to pursue these arrangements into the Decorated or After Gothic

styles, but I may mention that they appear in most cases to be preserved even there, and to have the additional embellishments of varied imposts to the successive orders.

Thus, an arch of two orders, the first continuous, the sub-arch shafted; or one of three orders, the first and third shafted, and the second continuous; are beautiful arrangements which perpetually occur in the Gothic. Both in pier arches and doorways their base is equally elegant, the continuous mouldings dying on a plain slope, while the shafts have regular bases and octagon plinths; the same principle is carried into still greater intricacy and variety in the After Gothics. When the vaulting of contiguous aisles is of the same height, so that each pier receives at the same impost level, ribs in all directions, these are not necessarily made all of the same size and importance; thus in the Temple Church, London, where a pier is made up of four cylindrical shafts attached to a nucleus or stem, this nucleus and the lateral shafts carry the longitudinal arches, and the face-shafts receive each a group of three vaulting ribs, that is, one transverse between two diagonal; this is not an uncommon disposition.

The Italian transverse arches in every period are made of equal breadth and importance with the pier arches, and may be seen in Pl. VI. VII. throwing their pilaster like surfaces across the

naves. The diagonal ribs, however, are smaller, and made up of mouldings more after our own Early Gothic manner. Pl. III. Fig. 26. shews a quantity of these from different examples, for the localities of which I shall refer to the list of Plates, as no general rules appear to govern their use: *b* is one of the commonest and occurs in all periods, *i* and *l* are usual in the Italian Gothic, *mno* are Gothic forms from the Angiovine specimens at Naples, and *rst* other Gothic ribs not found in Italy, but which may serve to contrast with the Italian forms.

SECT. 5. *Triforium and Clerestory.*

In the Roman churches of S. Agnese, and the choir of S. Lorenzo, there are galleries over the piers which may be called Triforia. In the first this seems to be the natural result of the locality, for the church is built on a piece of ground close to a very highly raised road, the Via Nomentana; the level of this road corresponds to that of the triforium gallery, which is entered from it by a proper door, and as the gallery runs round three sides of the church, this one entrance gives access to the whole of it, the body of the church on the other hand communicates with monastic buildings placed on this lower level. A similar upper gallery, or rather division of the height of the building into two orders,

occurs in the Lateran Baptistery of Constantine, and in the Lombard church of S. Tommaso at Bergamo.

There are, however, undoubted triforia in the churches of S. Michele at Pavia, S. Ambrogio at Milan, the Cathedrals of Parma and Modena; S. Vitale at Ravenna, S. Marc at Venice, and S. Sofia at Constantinople; also in the Cathedral at Lucca, and in S. Lorenzo at Genoa.

In S. Michele and S. Ambrogio (Pl. IV. Fig. 1.) the triforium is merely an arch of the same span as the pier arch over which it is placed, and in S. Marc, this gallery is carried across the great arches of the nave, by an arcade of three small arches on bearing shafts, having a close resemblance to the screen or colonnade which occupies a similar situation in the halls of the Roman Baths (Pl. I. Fig. 1.)

In S. Sofia and S. Vitale, however, the arched opening above this gallery is also occupied by arcades, and in these Byzantine specimens we seem to find the earliest traces of that practice of so decorating this member, which in the hands of the Cisalpine architects led to the invention of tracery, in the manner I have attempted to develope in Chap. V. Modena resembles S. Vitale in its triforium; Parma has an arcade of four small arches, somewhat like Pl. X. Fig. 1. Lucca (an Italian Gothic specimen) has two ample circular arches, each filled with handsome tracery after the

manner of the arcades of the Campo Santo at Pisa, and over them an insignificant little circular window for a clerestory; S. Lorenzo, which appears to be a work of French architects, can hardly be said to have a triforium, for there is no floor to this gallery, whose arcades are open to the side aisle.

With these exceptions I believe it may be said that no triforia are to be found in Italy; and indeed the great division of the vaulting wall into pier-arch, triforium, and clerestory appears to be entirely neglected. On this side of the Alps to be sure the triforium is often omitted, but then the clerestory division is well marked, and always has a string moulding, an arcade, or some other distinction. In Italy the clerestory string is never used, and the window is small and insignificant, and bears no part in the decorative support of the roof; hence one of the greatest beauties of the Gothic is lost.

In the Christian Roman and Lombard styles, the window is round-headed; a row of them may be seen in Pl. I. Fig. 4. Some of the Roman churches have tracery similar to Pl. X. Fig. 9. apparently interpolated; S. Trinita, Florence, Pl. V. Fig. 3. has a pointed trefoliated window, and small pointed windows of two lights are not unusual; but I believe Siena Cathedral to be the only Italian instance of large clerestory windows with tracery, and even these would be thought small on the other side of the Alps.

Small circles, or rather circular holes, are very common. The church of the Frari has these, (Pl. VII.) and they occur at the Cathedrals of Lucca, Florence and Verona, S. Anastasia at Verona, S. M. Novella and S. Trinita at Florence, and S. Martino at Bologna.

In fact the clerestory is sacrificed in Italy to the large pier arches, whose apices rising to the level of and sometimes above the impost of the vaulting, leave only a kind of triangular space for this member. When large and lofty windows are used, they are placed in the walls of the side aisles, as in Pl. VII.; in the chapels, as in Pl. VI.; or else in the west fronts at the extremities of the side aisles, where they are not unusually to be met with, as at Verona Cathedral.

CHAPTER VIII.

DOORWAYS.

THE Italian Enriched Doorways appear to me to be by far the best specimens of their Middle Age work, and they are, fortunately, extremely well preserved. Every other part of the building is liable to transformation, and frequently suffers more or less from the intrusion of new ornaments, or the destruction of old. The interiors especially may be found with every gradation of change, from the mere alteration of a few capitals to the complete mask of plaster-work, which transforms the Gothic cathedral into the pseudo-classical hall. Even the windows may have their tracery removed, but the doorways seem to have been always respected and allowed to remain; even when the original building has been taken down from behind them, and an entirely new one erected. In the list of churches in the Appendix, scarcely one will be found without its original doorway, and a great number have little else left. The same fortune has always attended doorways. How often, for example, the Norman doorway is found encrusted in the Early English façade of our own country.

The complete doorway of the Middle Ages may be considered as composed of three distinct parts. A *door-archway* occupies the thickness of the wall, and is richly decorated, being generally a compound archway of many orders and various decorations. Within this is the doorway properly so called, which is seldom of the same height or figure as the archway, while the space between them is decorated with figures or emblems, alluding to the purpose for which the building is destined, the saint to which it is dedicated, and so on; or else may be filled with tracery. The whole of this may be termed the *Doorway-plane.* Beside these the external face of the wall about the archway is generally occupied with some canopy, porch, roof, or other ornaments, which may be termed the *Extramural decoration.*

The complete doorway, therefore, is made up of the Doorway-plane, Door-archway, and Extramural decoration. For example, in Pl. xv. Fig. 8. the doorway-plane has a square-headed doorway with a semicircular pannel over it, containing a picture of the saint. The archway is a semicircular compound arch of three chamfered arches, with nook-shafts; and the extramural decoration is a gable resting on face shafts, which have lion-bases. It is plain in this example that the three parts of the composition are perfectly distinct; the capitals of each are on different levels and of

different sizes, the bases different, and there is no union between their ornaments.

It is not always that the parts are so distinctly separated, and in some examples, one or more are omitted, but these cases are always of such a nature as to prove that all three divisions were recognised by the Middle Age Architects. Thus Pl. XIV. Fig. 2., has the doorway only; and Pl. XV. Fig. 7., has the extramural decoration and the doorway without the archway. In our own country the doorway is very often wanting, and the archway in that case is the real aperture; except in some early specimens which have a transom, as at the Prior's Entrance at Ely; or in doorways with a double aperture, as at the west end of York, where the doorway is a double pointed arch surmounted by tracery. I shall proceed to treat of each part separately; and first of the *Doorway-plane.*

With the classical architects the doorway was always square-headed, either furnished with mere bordering mouldings, or architrave-mouldings as they are called; or else it was so arranged as to give an appearance of construction, its sides being treated as pilasters with capitals and bases supporting the lintel, which is in this case often crowned with an entablature*.

To relieve the lintel from the weight of the mass above it, the Romans commonly turned an

* Vide the examples in Donaldson's Doorways.

*arch of construction**, which is of course the effective head of the aperture; but they were ashamed of the artifice, and always concealed it under the plaster or marble decoration of the wall. In the Middle Age doorways on the contrary, where this construction is copied, it is always ostentatiously displayed, as in the usual doorways of the Pisan churches, Pl. XIV. Fig. 2.†, in which the mouldings and style of decoration exhibit a very slight departure from the classical styles: the lintel is in this example a piece of an antique soffit.

When the lintel is thus freed from the wall above it, it is convenient to call it the *transom*, a term implying a stone, which, free above and below‡, is sustained only by its extremities, and serves as a horizontal bond. Instead of the pilaster capitals, the transom may be supported at each end by corbels, as in Pl. XV. Fig. 6., or Pl. XIV. Fig. 1., or it may be left without any apparent support.

The transom is sometimes formed into a segmental arch: this is a favorite practice at Siena, where a great number of doors may be seen

* That is, an arch formed in the wall to distribute the superincumbent weight, and relieve some weak part below, such as an aperture or bad part of the foundation.

† S. Giov. in Fonte, Verona, has a very simple example of this elementary doorway.

‡ I do not consider a group of figures, or a pannel behind them, as violating the propriety of this expression.

so managed, and also occurs in the west door of the Eremitani at Padua.

In the Gothic of our own side of the Alps the doorway is often divided by a pier which sustains arches and some tracery, and in the Flamboyant style the transom is a very flat ellipse. The bisection of the doorway is not common in Italy, but occurs at S. Anastasia, and S. Fermo Maggiore at Verona; and lastly, as already stated, the transom is rarely found in England: perhaps the images it carried have led to its destruction.

In the *Archway* portion are to be found the richest displays of compound arch-work that the Middle Age Artist was capable of producing. The magnificent examples of our own Norman and Early English styles have been long the theme of admiration, and those of the Italians are scarcely inferior. Their door-archway consists of from two to five or even more orders, and when the wall of the building is not sufficiently thick to admit of the required degree of depth, it is frequently, as with us, assisted by bringing forward the face, (this has been done in Pl. XV. Fig. 8.)

The edges of the archways may be all plain, in which case they are commonly provided with nook-shafts, as in Pl. XIV. Fig. 1., which has three orders*: the west door of the Cathedral at Verona

* Similar cases are the west doors of Lucca Cathedral, S. Michele in Borgo at Pisa, S. Michele at Pavia, S. Stefano, S. Matteo,

has five orders of such arches, and that of S. Fermo Maggiore has eight arches with nook-shafts all continuous.

Sometimes the shafts are omitted, and the faces of the orders recede but slightly, like those of an architrave, as at Foligno Cathedral, which has five of them, the fourth only having a broad flat shaft; the first is continuous, and has a dripstone and mosaic border, the remainder have a capital band running across them, and are ornamented, the second with mosaic, and the third and fifth with rich carving. The soffit of the sub-arch has figures emblematic of the Evangelists, and there is no doorway-plane.

The edges of the arches are often chamfered or moulded. Fig. 8. has them chamfered. Fig. Q is the section of a door-archway at S. Giovanni, Lucca: the edges *abc* are each decorated with a moulding*, and one nook-shaft is placed between the second and third orders. These edge-mouldings are very often chamfered off, or otherwise got rid of before they reach the base and capital, and then resumed over the arch, in order to simplify the impost, and they may even be confined to the arch, and the pier-edges suffered to remain square†. Hollow cham-

S. Matteo, and S. Agostino at Genoa, S. Domenico at Foligno, S. Nicolo at Spoleto, and the Chapel on the West Hill at Sion.

* The same is used in the west door of Lucca Cathedral, and of S. Giov. in Conca at Milan.

† This is not uncommon in the Norman doorways.

fers*, edge-beads† and mouldings like Fig. *R*‡, are also used.

The edge-mouldings may however occupy so much of the arch, that its elementary rectangular form disappears; and this is actually the case in some of the later Italian specimens: thus in the pier of which *BC* is the plan, the arrangement of mouldings appears to be governed by no such rule, and the distinction of orders is lost; but the cases of this kind are few, and principally confined to Venetian examples; for even in the late Italian Gothic doorways of the Cathedral at Florence, S. Petronio at Bologna, and S. Tommaso at Verona, the rectangular forms and the nook-shafts are still retained. S. Anastasia, Verona, may also be cited as a late example having five distinct, deep, and moulded orders without shafts.

In the Italian door-archways, the use of the banded impost is universal: I know but of four exceptions, in which the shafted impost occurs, the west doors of S. Lorenzo at Genoa, S. Antonio at Padua, the Baptistery at Parma, and S. Antonio at Rome.

* In several doorways at Perugia, west door of Cathedral Siena, S. Francesco, Terni.

† Principally in the Venetian territory, as the Frari and S. M. dell' Orto.

‡ S. Giov. in Conca at Milan, great west door at Parma, S. M. Novella at Florence, the last combined with the ogee.

On our own side of the Alps, however, a different course was pursued. In the Norman doors, edge-shafts and shafted imposts, with an occasional mixture of continuous arches as at Malmsbury and Iffley, are always used. These continuous arches, however, never *alternate* with the shafted orders, but either occupy the whole of the orders, or merely the lowest ones, most commonly the sub-order only. In the Early English, the rectangular succession of archways melts down into a system, which may be better described as consisting of successive orders of shafted ribs, applied to a chamfered surface. The ribs join each other in the arch so as entirely to conceal this surface, but below the impost it appears behind the shafts, and is either a plain slope, or has projecting mouldings and rows of flowers and dog-tooth ornaments, which serve to relieve the shafts and contrast with their plainness. Sometimes a row of smaller shafts are placed behind the principal ones.

In the Complete and After Gothic door-archways the mouldings are still arranged in groups, which may be called orders, and are separated by bold and deep hollows which are sometimes occupied by piles of shrines or other decorations. These arches or ribs are generally continuous, and some of them have shafted ribs applied to them, producing a delightful variety; the added ribs are either face-ribs, edge-ribs, or sub-ribs,

according as they are applied to the face, the chamfered edge, or the soffit of the group to which they are united, but their application is governed by no rules: the sub-rib is often applied to the first group or order, and the face-rib to the last; usually, however, the sub-rib is attached to the last order*. It is not my intention in this place to pursue this analysis of the Gothic arrangements, and I shall therefore proceed to the *Extramural Decoration* of the Italian Doorways.

This may consist of a Porch, a Canopy, or a mere Dripstone.

Italian Porches are always constructed in the following manner: two parallel and horizontal stone beams spring from the wall on each side of the door-archway. Their outward extremities rest each on a shaft, and another is in the larger specimens placed close to the wall, to assist in supporting the vault. These four shafts are not necessarily alike; they are often borrowed from antique buildings, and the two foremost rest on the backs of animals†,

* The primary orders are frequently square in the After Gothics, and the spandrel space between them and the arch-head of the succeeding order is occupied by tracery. The later Moorish arrangements resemble this.

† These animals are the insignia of the state, and are often represented as grasping and tearing other animals, which indicate the towns or factions with which they were at war. For example, the Griffin belongs to Perugia, the Wolf to Siena, and the Lion to the Guelphic party. Accordingly the doorway of the Palazzo del Publico at Perugia is decorated with a Griffin tearing a Wolf.

such as lions, bears, or wolves. Upon the beams rests a waggon-vault, forming the roof of the porch, and generally concentric with the archway. The front is finished upwards with a gable and common slanting roof, producing the form of Pl. VIII. Fig. 23., when viewed in front. Porches of this description, with slight variations, are found at S. Saba, S. Clement, and S. Prassede at Rome, S. Zeno at Verona, at Monza, the west front of Modena Cathedral, and in many other instances.

The west porches of the Cathedrals of Verona, Parma, Piacenza, Cremona, and the south porch of Modena, have two stories. In these the lower story is constructed as before, but its roof is finished with a horizontal floor, upon which stands another porch with a gable precisely similar to those just described. At Modena and Cremona, however, the upper porch has in front an arcade of three arches on bearing shafts, instead of a single one.

The south porch of Verona Cathedral, which is small and of two stories, without the intermediate floor, is a very curious specimen; and there is a large porch on the north side of S. Fermo Maggiore, Verona, which differs from these in having an arch on each side, instead of the lateral stone beams. All these are plainly derived from the antique portico, which even in some cases was, like them, roofed in the central part with a waggon-vault; for example, the portico of the Pantheon. Somewhat similar porches are

to be met with out of Italy, of which that of S. Trophime at Arles is a notable example.

These porches in Italy are confined to the Christian Roman, and Lombard styles, and never occur in the Pisan, Byzantine, or Italian Gothics. Nearly allied to them are *Hoods*, which consist of a porch-roof, resting either immediately on corbels, or else on shafts which are so sustained. Pl. XIV. Fig. 1., shews one of these, from the church of S. Pietro Martire, near S. Anastasia at Verona. Others may be found at S. Apostoli and S. Stefano at Verona.

From porches we are naturally led to *Canopies*, of which the earliest specimens have aptly been described as resembling the front of a porch stuck against the wall*. The west door of S. Giacomo at Bologna, Pl. XV. Fig. 8., has a canopy of this kind, in which the shafts that support it are placed close to the wall, resting on lion-bases. It is plain that nothing is wanting to make this into a porch, except increasing the distance between the columns and the wall†.

The south doorway of S. M. Novella at Florence, and the west of S. Giovanni in Conca at

* Vide Architectural Notes on German Churches, p. 63.

† They may perhaps have been derived from the pediment supported on two columns, with which the Romans delighted to adorn their doors and windows in the decline of the art, for in their later specimens they allowed the arch-headed opening to rise into the pediment, cutting the horizontal entablature.

Milan, have similar canopies; and those of S. Matteo and S. Agostino at Genoa, and S. Ercolano at Perugia, belong to a later class, in which this member is still the front of a porch, but has broad pilaster faces in lieu of the columns and lion-bases, consequently has still less relief.

The canopies of the Italian Gothic are constructed on a totally different principle, and resemble those of the complete Gothic. In these the canopy, instead of consisting of one mass, terminated above by the gable, and below by the arch, and resting as such on a pair of shafts; is treated as two inclined lines capable of exerting a diverging pressure parallel to the wall. To resist this two vertical masses are attached to the face of the wall, which may be semi-turrets, pilasters, buttresses, or groups and piles of shrines, and which I shall call the flanking piles: they differ altogether from the shafts of the last-described class, because, instead of supporting a vertical weight merely, they are placed on the sides of the canopy; rising above it, and sustaining its diagonal thrust. Pl. xv. Fig. 6., is an Italian Gothic example from S. Carlo, at Florence.

This class admits of great variety in the flanking piles, as well as in the form of the canopy itself, which is often an arch, as in S. Stefano at Venice, Pl. xv. Fig. 7., in which too the flanking piles are pinnacled turrets resting on corbels. In the Cathedral at Florence, both

doors and windows have canopies, whose piles are twisted columns sustaining square turrets crowned with statues: the canopies are of a disagreeably narrowed form, of which Pl. VIII. Fig. 24. is the outline, and the space between them and the arch is occupied with mosaic. Elegant examples occur in the doors and windows of the Cathedral at Siena; there is especially a doorway of the unfinished nave, near the façade of S. Giovanni, which merits notice. In the Italian Gothic canopies, the crowning mouldings, and frequently the dripstone, return and break horizontally round the flanking pile, as in Pl. XV. Fig. 6.; in the Gothic canopies, on the other hand, they always die against its upright face. The unfinished doorway at Siena, just cited, is the only exception I know of to this practice, which, however trivial the distinction may appear at first sight, is sufficient to give the very peculiar effect of the Italian examples*.

Pl. VIII. Fig. 11. is the outline of a canopy over the door of Orsan Michele, at Florence, and also of the Porta della Carta at Venice,

* Other canopied doors are at the Cathedrals of Arezzo and Naples, S. Petronio at Bologna, S. M. Maggiore at Florence, S. Francesco at Siena, (in the cloister), S. Giov. Carbonara, S. Domenica Maggiore, and S. Giovanni Maggiore at Naples. Very rich canopies are also to be found in the tabernacles of the Italian churches, especially at Rome, as at S. Paolo, and S. Giov. Laterano, and in their monuments and shrines.

and Fig. 12., that of the Madonna dell' Orto at Venice. The Flamboyant style is remarkable for the new forms of canopies which it abounds with, and of which Figs. 13. to 20. are specimens of common occurrence in France.

Figs. 23, 22, 21. shew the gradual rise in pitch of the Gothic canopies, from the first porch-like form of Fig. 23., to the highly acute one Fig. 21., whose sides are tangents to the arch it accompanies. In the intermediate form, Fig. 22., the short uprights still remain at the sides.

Fig. 18. is an agreeable combination of an ogee canopy with a pointed arch, and may be contrasted with the Flamboyant specimens Figs. 19. and 20., from the Cathedral at Albi.

The *Dripstone*, or projecting moulding, which is attached to the face of the wall, and runs parallel to the arch, is a very universal feature in Middle Age Architecture. It is doubtless a corruption of the external architrave-moulding of the Romans, and appears at Pisa in a form perfectly resembling the antique; but with this difference, that instead of resting on the impost-moulding it has a corbel provided for it, as in Pl. XIV. Fig. 2.; this being one of the early manifestations of that system of independent support for parallel members, which eventually pervaded the whole scheme of architecture. These small corbels are very common; but sometimes the dripstone rests on much larger brackets,

sustaining animals, and in some cases having pilasters or shafts placed under them, as at S. Giovanni at Lucca, and the west door of the Town Hall at Perugia.

Sometimes the dripstone rests on the impost-band in the antique fashion, as at S. Domenica at Foligno, S. Agostino at Genoa, and S. Ercolano at Perugia; at S. Niccolo at Spoleto, and S. Francesco at Terni, it returns horizontally outwards as in the Complete Gothic*.

Venice and Naples present each of them a peculiar class of doors. In the first, the doorway is square-headed, and furnished with bordering mouldings, which run round it in the manner of architraves, but differing in profile from them. Above this is placed a canopy, forming together with the door a singular combination of Grecian and Gothic arrangements, which I cannot help referring to the East, for there are two doorways of this kind in S. Marc, one of which is seen in Pl. XIV. Fig. 5., and is in the interior of the church, near the south transept. The form of the canopy, which is copied with the greatest care, can have been derived from no European source.

The identical arrangement is preserved in Pl. XV. Fig. 7. (S. Stefano, Venice,) where the doorway has a profusion of richly carved mould-

* The side south door of S. Fermo Maggiore at Verona, has a thick continuous roll moulding for its extramural decoration.

ings, and a Gothic canopy with double foliation; and similar doors occur at the church of the Frari, and in other Venetian examples.

The profile of the door of S. Marc, Fig. 3., is shewn at *HI*, and there are also square doors at Murano, S. Sofia at Padova, and S. Zeno at Verona, which have profiles resembling this, especially in the edge-roll and its hollows.

The Neapolitan doors have a number of flat faces receding slightly behind each other, and separated by a rib of mouldings which run over the arch. Pl. XIV. Fig. 4. from S. Chiara, shews three of these faces with their separating ribs, and *DE* is a plan of the left-hand pier. Similar specimens are to be found at S. Lorenzo and S. Domenica Maggiore. There is one at the Incoronata, which has but two faces, and others with a single face and its bordering rib abound*; as, for instance, the west door of S. Giovanni Carbonara, the side west and south doors of the Cathedral, and that of S. Pietro Majella. S. Giovanni and S. Domenica have canopies, and S. Pietro Majella a hood, and the transom of S. Lorenzo is formed of five stones arranged into a singular kind of three-sided arch.

Besides these, there are in the streets a great number of segmental doorways nearly alike, of the kind Fig. 3., of which *A* is a plan of the

* These may be found elsewhere, as in some of the smaller doors of the Cathedrals at Siena, and Fiesole.

right-hand pier at the level of *a*. They belong not to churches, but to private or public buildings, and are only remarkable for their number, uniformity, and from being confined to this district. One of them bears date the twentieth year of King Ladislaus (1408), which is probably near the period of them all.

There are two other remarkable doors in Naples; one that of S. Giovanni Maggiore, which has a highly pitched canopy with lofty flanking piles of shrines with pinnacles; and a double set of Flamboyant crockets, one range of which in low relief spreads upon the wall, and serves as a ground for the other set, which is narrower and more prominent. Both canopy and pinnacles are crowned with a figure of an angel with spreading wings, and the whole occupies the entire gable of the chapel. The other door is in Largo Donna Regina, and has a very curious six-sided canopy. The door of S. Eligio should also be visited, as a good piece of Angiovine Gothic.

One or two old Italian doors consist of a mere round-headed arch and transom, with a continuous archway of mouldings, as the side south doors of Modena Cathedral, the west door of the same which has the addition of a banded nook-shaft, and the side west doors of Foligno, which are decorated with a kind of zigzag, or vandyke moulding, and have no transom. S. Jacopo di Rialto at Venice, is another example.

CHAPTER IX.

GENERAL ARRANGEMENT AND DECORATION.

SECT. 1. *Proportions and Plan.*

HAVING now gone through the principal elementary portions of which the Middle Age Churches are made up, it remains to say a few words on the proportions and arrangements of them considered as a whole; and here we shall find some striking differences in Italy.

No architects ever succeeded so well as the Gothic in exciting instantaneously the ideas of height, length, and breadth; and this they did by employing a different method for each. The compartments of their naves taken singly are very narrow in proportion to their height; and as these compartments are all alike, and well separated from each other, the attention is naturally fixed upon a single one, and the idea of height unmixedly impressed on the mind. That of length, again, is produced by a long succession of these same compartments; while lateral extension is represented by the vista across the vaulted aisles and chapels, low in proportion to their length and accumulated breadth. Each dimension therefore having its own mode of representation, suffers in no respect by contrast

with the others, as they all do in a hall of the classical style; where, if an arch or an aperture have height, it has breadth to correspond; great width is accompanied by great length, and so on; the same proportion being observed for large buildings as for small, and that proportion regulated by the notion that no dimension is to appear in excess; so that the highest praise that can be bestowed upon such a building appears to be, that its magnitude is only to be discovered by comparing its parts with some known standard, such as the stature of a man.

This practice, however well adapted to the classical styles, is fatal to the Gothic; and herein lies a great source of that mixture of horizontal and vertical characters which I have stated to belong to the Italian Gothic. In the Cathedrals of this side of the Alps, such as Cologne, Ulm, Ratisbon, Chartres, Amiens, and Rheims, the height of the compartments of the nave varies from five to five and a half times their width; and the proportion of the breadth of the nave to the span of the pier-arches is three and a half or two to one. There are six or seven compartments of the nave besides those of the choir, and often two side aisles on each side of the nave, besides chapels, all in accordance with the principles just laid down. On the other hand, in the Italian Cathedrals, such as Florence, S. Petronio at Bologna, and Arezzo,

the height of the nave compartment is not much more than double its breadth; the span of the pier-arch is equal to that of the transverse; the compartments are necessarily few in number from the great size of the pier-arches; and so far from a vista being obtained across a series of side aisles, the compartments of the latter are parallelograms, with the long side turned to the nave; so that the side walls of the church are brought into the fullest view, and made still more conspicuous by the wide pier-arch and the aisle-window with which each compartment is often pierced. In these churches we are shut up within four walls; in the former, we are free to wander in all directions*.

To shew that there is no want of magnitude, let us compare the dimensions of four principal Cathedrals.

	Height of Nave.	Width of Nave.	Span of Pier-arch.	Diameter of Pier.	
Florence	129	51	51	8	Dimensions in French feet, on the authority of Wiebeking.
S. Petronio	128.5	46	46	8	
Ulm	129	44	16	8	
Amiens	130.8	38	16	6.5	

Here we see, that with equal dimensions in every other point, the Italian Cathedrals have

* The Cathedrals of Siena and Milan are built in the true Gothic proportion; the first being an early, and the last a mixed specimen.

pier-arches of three times the span of the German and French examples, and yet these magnificent pier-arches are entirely destructive of the effect of the whole as a Gothic composition; so necessary is it to study every part of the distribution of architectural members, if we wish to reproduce an effect without absolutely copying the building itself*.

Instances are not wanting of Italian churches in which one square compartment of quadripartite vaulting corresponds to two squares of side-aisle vaulting. These are (excepting the Cathedral at Vicenza) for the most part Lombard specimens†: S. Antonio at Padua, also belongs to this class, but the nave is entirely vaulted with a succession of domes.

In describing arrangements it is convenient to assume in all cases the longest diameter of the church as the east and west line; the altar

* Other examples of churches whose nave compartments are square, and the side aisles parallelograms, with the long side to the nave, are S. M. Maggiore, S. Remigio, and S. M. Novella, at Florence; the Cathedral and S. Anastasia at Verona; S. Giov. in Monte, and S. Martino at Bologna; S. Gio. and Paolo, and the Frari at Venice; S. Corona at Vicenza; and S. M. sopra Minerva at Rome.

There are a few cases out of Italy, as S. Pierre at Geneva and the Cathedral at Antwerp; but the most universal arrangement on our own side of the Alps is a double square for compartments of the nave, and a single one for those of the side aisle.

† S. Ambrogio at Milan; S. Giov. in Borgo and S. Pantaleone at Pavia; S. Sofia at Padua; Modena Cathedral; S. Agostino at Genoa; and the Carmine at Milan.

end of it being the east. This is generally the true bearing, but is, I think, oftener departed from on the Continent than with us. In the Italian plan, the cruciform arrangement is not unfrequent, but differs from the Gothic in some particulars.

Transepts are sometimes concealed by carrying the nave-walls with their triforium and clerestory, across the opening which connects them with the crossing compartment, so that their existence is only to be discovered by entering them: this is the case in the Cathedrals of Pisa and Lucca, and at S. Simpliciano at Milan. The triforium and the clerestory windows are at these points openings only.

The eastern arm of the cross, instead of being prolonged into a choir, as in the complete Gothic, often consists of a mere semi-domed apsis, opening immediately from the east wall of the transepts. This is the Christian Roman arrangement, and appears a direct copy of the heathen temples and basilicas.

At Siena, Pisa, and Milan, however, the choir has a few compartments of vaulting; and in later examples, the apse is separated from the transept by an intermediate compartment* of Roman vaulting, and is made polygonal instead of circular.

The only instances of the apsidal aisle that I have met with (excepting the Angiovine spe-

* Vide Architectural Notes, p. 13.

cimen of S. Lorenzo at Naples) are, S. Antonio at Padua, S. Stefano at Verona, the Lateran and Milan Cathedral; the first only has radiating chapels. S. Stefano is a very curious and unique specimen, and resembles the Norman work more than the Lombard, for it abounds with edge-shafts after their manner. With these exceptions, it may be said that this arrangement is foreign to Italy; but on the other hand, the east end is often managed in the following peculiar manner.

The entire east wall of the transepts is pierced into an arcade of from five to eleven lofty arches, opening into as many parallel chapels, each of which consists of a single compartment of Roman vaulting, and generally has a polygonal apse; the central one is somewhat larger than the rest, and serves as the eastern arm of the cross. S. Croce at Florence has eleven; the Frari at Venice, and S. Domenico at Siena, seven; S. M. Novella at Florence, S. Giov. and Paolo at Venice, S. Anastasia at Verona, and S. Pietro Majella at Naples; five of these chapels. The central apsis both of the Frari and of S. Giov. and Paolo is particularly large and splendid, each side of the polygon having two lancet-shaped windows with tracery, placed one above the other, and entirely occupying it, so as to admit a flood of light.

Chapels may often be found arranged along the side-aisle walls, but they rarely form part of the original design, and are generally of all

manner of different ages and styles; some of them present beautiful specimens of brick-work*.

Sometimes the entire space of the choir has a crypt or subterraneous church under it. The nature of this may be understood from Pl. I. Fig. 4., where it will be seen that the entire floor of the church is sunk at the eastern extremity, and a vaulted structure raised upon a number of small piers or bearing-shafts, sustaining a platform which constitutes the floor of the choir: this presents a vertical face towards the west, in which are arches and flights of steps leading down to the crypt, while other steps on each side give access to the platform; the ascent and descent being nearly equal.

S. Zeno at Verona, the Cathedrals of Parma, Modena, and Fiesole, and many other early examples, have crypts of this kind.

The *crossing*, or portion which is over that space in the ground-plan where the transept crosses the nave†, is pretty often covered with a dome, which in most cases is on an octagon plan, as at S. Michele and the Certosa at Pavia, S. Ambrogio at Milan, Monza, the Cathedrals of Parma and Pisa, and also at N. D. Avignon and N. D. de Grace at Arles‡; and the pendentives are

* For instance, those annexed to the Cathedrals of Mantua and Verona, and to many churches in Milan.

† Architectural Notes on German Churches, p. 13.

‡ The pendentives of Monza and S. Michele are carried up in two steps. Those at Arles and Avignon are particularly worth attention.

of the form Pl. II. Fig. 10., in which a conical vault is thrown across the angle of the square, having its apex in the angle, and its base forming an arch which sustains the corresponding side of the dome.

This is totally unlike the Byzantine pendentive, which is a portion of a spherical vault cut off from a sphere whose diameter equals the diagonal of the apartment to be covered. This (which is also used in modern architecture) is to be found in S. Marc at Venice, S. Antonio at Padua*, S. M. della Pieve at Arezzo, and Trent,

* In many countries buildings are met with which, like Roslyn Chapel in Scotland, present all manner of anomalous characters; separating themselves from the other structures of the same age and nation, and perplexing investigation. St Antonio at Padua is one of these; and I imagine its anomalous appearance to have arisen from the attempts of an Italian Gothic architect to imitate S. Marc at Venice. It belongs to an early period of the Italian Gothic, having been built between 1231 and 1300; and accordingly its piers are cruciform, with vaulting shafts in the nooks of the cross, and the side aisles have Roman vaulting with diagonal ribs to these shafts, but in the nave each compartment is covered with a dome on Byzantine pendentives, which rest on the shafts. The nave has intermediate piers and a triforium, and the pier-arches are pointed; but the great clerestory arches and transverse arches are circular, and the clerestory wall is recessed back over the triforium gallery. The transepts are each covered with a dome, as well as the crossing compartment, the intermediate compartment, and the choir; thus, with the two domes of the nave, making in all a cruciform group of seven domes. In the exterior view, the dome of the crossing appears covered with a conical spire, and several slender round turrets with spires of different heights are added, so that the whole

and always sustains a dome on a circular or elliptical plan, whereas the first kind of pendentive is only used for polygonal domes. In the German Romanesque, a pendentive is used which appears to be a mixture of these two*.

The dome of Siena is dodecagonal, and set on a hexagon plan by means of conical pendentives. This form of the base allows the side aisles to penetrate the area of the dome. Florence, again, has an octagon dome on an octagon plan, with the same disposition of the side aisles.

In the Romanesque churches of the south of France a quantity of chapels are attached to the choir and transepts, each consisting of a waggon-vaulted compartment and a semi-domed apse. Thus, at La Charité there are five of

whole assumes the most grotesque and original appearance imaginable.

The details however belong to the Early Italian Gothic. The exterior is of brick, with pilaster buttresses breaking into corbel-tables round the tambours of the domes. There are *solid* flying buttresses, and a plain heavy west front. The great arched window of the north transept, Pl. XI. Fig. 2., has been already described. The apse is a semicircle divided into seven compartments; this and a half square constitute the plan of the choir, whose dome differs from the others by having fifteen ribs. There is also a circumscribing aisle, with nine radiating chapels. This choir, and its aisle and chapels, appear to be rather of a later date than the body and transepts, and are probably the work of another architect. Niccolò Pisano is said to have been employed about the building, and perhaps this was his work, as pointed arches are employed throughout.

* Architectural Notes on German Churches, p. 43.

them, radiating from the apsidal aisle, and two on each side attached to the east walls of the transept. The crypt of the church at Mont Majour, near Arles, has a similar arrangement with seven chapels, which also appears at Valence. In all these cases there is a space of wall and a window between the openings of the apsidal chapels, which serves to light the aisle.

I am inclined to think that the use of radiating chapels behind the choir, which was so universally practised in the Gothic, first arose in this district. The intermediate windows were afterwards abandoned, as the chapels were increased in size and touched each other, leaving no space for them. They may be found in some of the large churches of the Netherlands however, as at S. Jacques, Antwerp, in which the apsidal aisle is polygonal, and has five sides; three of these communicate in the ordinary way with large polygonal chapels, while the two intermediate sides, instead of opening into similar chapels, have large tracery windows. Part of this window can be seen from the transept of the church, and produces a very singular and beautiful effect of architectural intricacy by its combinations with the chapels and aisles.

These chapels with their aisle behind the choir should always be carefully examined, as the architect evidently delighted in the contrivance of intricate vaulting and plans for this

place, so favourable from its form to complexity of arrangement. Amongst other specimens, I may mention S. Sauveur at Bruges, S. Jacques at Antwerp, the Cathedrals at Augsburg and Munich, and S. Trophime at Arles; every one of which exhibits some singular and ingenious device.

Sect. 2. *Exterior Decoration.*

The inferiority of the Italian to all the other Gothic styles is no where so manifest as in the exteriors. The want of towers or at least their disunion from the building, the absence of pinnacles and flying buttresses, and the insignificance of their clerestories, all combine to deprive them of the picturesque outline and aspiring character of our own Cathedrals.

The west fronts of the Christian Roman Churches appear to have had no architectural ornament except the symmetrical disposition of a few round-headed windows, and sometimes a long, low, shed-like porch, occupying the whole length of the front below, as at S. Lorenzo, S. Giorgio in Velabro, S. Clement, and S. Vincenzo alle tre Fontane; and their lateral walls are of naked brick-work.

The Pisan churches are not very dissimilar from those of the Roman in the interior arrangement, for, like them, the main walls of the nave are sustained on arches and shafts; but the great difference is in the exterior, which

is in this style decorated with arcades and pilasters in relief, while the west end is entirely covered with a screen consisting of two or more tiers of arcades on small shafts, constituting as many real galleries, and resting on the lower story as a kind of basement whose front has commonly about five arches in relief, the two extremes being pierced by the doors of entrance. There are a few early specimens in which the whole front is decorated with pilasters in relief, as S. Frediano at Pisa; but with this exception, the description as given above is true for all the specimens of this age at Pisa, Lucca, Cremona, and other towns of that district.

Amongst the Pisan fronts, S. Caterina and S. Michele in Borgo, as well as the Cathedral at Carrara, deserve particular attention, from the curious transition they exhibit between the Pisan style and the Italian Gothic. Formed entirely of arcades in tiers like the former, the arches are pointed and trefoliated like the latter; one of these arches is represented in Pl. IX. Fig. 16.

The front of the Vecchio Pieve at Arezzo is a curious Pisan specimen, but with this new feature, that the number of openings increases in each tier upwards. The ground-tier has five arches in relief, the second thirteen arches, the third twenty-five, and the upper one thirty-two shafts sustaining an entablature. The apse of the church is richly decorated in a similar manner.

The Lombard fronts are also decorated with arcade galleries, but these are independent of each other, and appear more like excavations in the face of the wall, or rows of window-apertures; sometimes one of these galleries will follow the outline of the gable, by ascending in steps so as to run parallel with its outline, as at S. Michele and S. Giovanni in Borgo at Pavia, and at Piacenza, and Parma; most of which have also another horizontal gallery lower down, while at Modena and S. Zeno at Verona, the horizontal gallery only is employed, which at Modena exactly corresponds in height and decoration to the triforium within.

In fact therefore, arcades may be applied in two ways to the decoration of an exterior. Either the arcades and galleries may be arranged in successive tiers one above the other; or the height of the wall may be occupied with a single tier, whose pilasters with their arches rise to its cornice, and these may or may not have galleries in their intervals, forming a subordinate order of decoration. The first method appears to prevail in the Pisan district, the second in the Lombard, where it occurs at Modena, S. Michele at Pavia, and in the old churches at Verona. In both the pilasters occasionally have entablatures instead of arches.

A large class of fronts of all ages depend for their decoration on the doors and windows,

which are large and conspicuous. Thus, the Cathedral at Fiesole has a blank gable with three doorways below, the central one highest; and a circle above. A horizontal string runs over the doors, inflected into a triangular gable in passing the central one, and each side of the front is bounded by a slight pilaster buttress. Generally, however, these fronts are divided vertically by pilaster buttresses into portions corresponding with the aisles, and are crowned with corbel tables of various kinds. The wheel window is the prevalent decoration of the central compartment, and is sometimes circumscribed within a square, as at Orvieto, Siena, Spoleto, S. Caterina at Pisa, Carrara, and Monza. This square is bordered with a series of pannels, and the spandrels occupied with tracery or sculpture. In later specimens, the lateral compartments have each a large pointed window with tracery which lights the side aisles, as at Como, S. Anastasia at Verona, S. M. dell' Orto at Venice, and S. Giacomo at Bologna; and the pilaster buttresses are generally crowned with a pinnacle or turret of some kind, and are in the more elaborate fronts as at Siena, themselves covered with pannels and canopied niches.

In the Pisan and Lombard churches the same kind of arcade decoration is used for the flanks of the building as for its gables, as at Pisa Cathedral, S. Paolo a Ripa d'Arno, and

Modena Cathedral; and in other cases there may be found a mode of decoration which is more universally distributed over the Middle Age churches than any other; that is, broad flat pilaster-like buttresses, which at their upper extremity break into corbel-tables of small arches.

In the Italian Gothics the prevalent ornament is also the pilaster buttress, but the wall is crowned by a kind of cornice, which rests on a corbel-table of small pointed or intersecting arches, and which breaks round these buttresses, capping them; so that the buttress can neither be said to pierce the cornice, or the cornice to rest on the buttress. In this respect the equilibrium between the Roman and Gothic character is well maintained. These cornices are mostly of terracotta, and of great elegance and richness. Pl. IV. Figs. 10. 11., and Pl. IX. Fig. 13. are specimens. In a few cases the buttresses run up into turrets with pinnacles, and the compartments have each a gable between them, as in the chapels of Mantua and S. Petronio at Bologna.

Sect. 3. *Towers.*

The Campaniles and Towers of Italy are the only works of the Middle Ages that appear to have attracted the attention of all travellers. Their isolation from the churches, by which the effect of their great height is increased, the large proportion of the height to the base, their nearly

equal diameter throughout, and the absence of projecting buttresses—in all respects contrasting with the towers of the Gothic architects—have given them a very picturesque and striking character, although in architectural beauty and splendour they are left far behind the works of the latter.

Some of them have even acquired celebrity from the carelessness or ill fortune with which their foundations were prepared, which has caused them to decline considerably from the perpendicular, as at Pisa and Bologna. This has been converted by the patriotism of the Italians into an additional proof of the skill of the architect, who was able to make a tower lean so far over its base without falling. Messrs Cresy and Taylor have shewn very satisfactorily that this was not the case at Pisa, as the scaffold-holes incline just as the tower does; and also that the settlement must have begun to shew itself before the completion, from the attempts that were made to rectify it, by increasing the height of the columns and cornices on the lowest side, in order to throw the upper part of the building in the opposite direction. I observed the same artifices in the Garisendi tower at Bologna.

The brick towers at Rome are square: the basement story is carried up without apertures to a height about equal to that of the roof of the building to which it belongs; above this the

tower is divided by brick cornices into stories, the number of which varies in the different examples. At S. Maria in Cosmedin, there are seven, exclusive of the basement; the two lower ones have on each face two round-headed windows, and the third, three; the remaining four stories have on each face a window of three lights, one of which is represented in Pl. x. Fig. 1. The whole is capped with a plain roof. There are an abundance of towers at Rome differing from this only in the number of stories and height.

The same disposition of the tower into a tall plain basement surmounted by a number of stories of pretty equal height and separated by a small cornice, is to be found in a great number of instances besides those at Rome, but the management of the windows is somewhat different. These consist of an arcade with bearing shafts, and, generally, their arches are of two orders; the first order on corbels, as in Fig. 1., but the shafts are brought forwards to the front, and the number of arches or lights in each window increased in the upper stories. At the tower of Siena Cathedral, the number of lights in the six upper stories increases upwards in a regular arithmetical progression, the first having one light, the next two, and so on till we come to the highest, which has six lights. The Cathedral and S. Michele at Lucca have towers nearly the same.

In another class the tower is carried up nearly to the top without any decoration, except, perhaps, pilaster buttresses at the angles and sides, which break occasionally into a horizontal corbel-table; and the only apertures are small holes and slits to give light to the staircase; but the upper part has one or more large windows of many lights, and perhaps imperfect tracery, and is in some cases surmounted by an octagon turret or lantern, as at Cremona, the Piazza dell Erbe at Verona, and the Frari at Venice; S. Zeno at Verona has one of these plain towers without the lantern. To the same class belong the tower of S. Marc at Venice, the tower of the Ducal Palace at Florence, the Torre del Mangia at Siena, and that of the Asinelli at Bologna.

In all cases, however, the quantity of decoration and aperture is increased in the upper part, excepting at Pisa, where every story of the leaning tower is alike decorated with an arcade gallery, save the basement upon which the arcade is only represented in relief, and with half the number of apertures. Spires are also to be met with, which are sometimes square pyramids, as at S. Zeno at Verona, and in other cases are octagons mounted on octagon lanterns which rest on the square towers, as at Modena and Cremona*.

* The octagon spire of S. Anastasia at Verona, rests immediately upon the square cornice of the tower; the whole is of fine brick-work. The tower of the Badia at Florence

When a square tower is crowned with an octagon spire or lantern, the change of form between the square and octagon, as well as that of inclination between the upright walls and the leaning sides of the spire, is attended with a degree of abruptness which more or less offended the eyes of the Gothic architects, and which they attempted in all manner of ways to soften; but the Italians never heeded it; their tower, as I have already said, is square and of equal diameter throughout, capped with a cornice, and upon it stands the octagon spire, with, perhaps, a small pyramid upon each angle of the tower.

In the complete Gothic and its derivative styles, on the contrary, the most beautiful artifices are employed to avoid the abruptness of the combination; and especially in Germany, where, in the latest specimens, as at Frankfort on the Maine (1414), the transition is so perfectly gradual, that although the tower has a square base and an octagon spire, it is almost impossible to say at what point of the height the square ceases or the octagon begins. So the square tower of St Stephen at Vienna (1400), is converted by projecting buttresses into a pyramidal figure, whose sides in the elevation prolong the outline of the spire to the ground.

is a handsome hexagon with gables at each side and a spire, and that of S. Niccola at Pisa, an octagon surmounted by an hexagonal lantern and stunted spire; and lastly, conical spires sometimes occur, as at S. Fermo Maggiore, at Verona.

Thus too, in simpler and earlier specimens, as in our own country churches, the octagon and square are variously united; sometimes those sides of the former which are opposite the angles of the square, are terminated downwards by triangular faces, whose apices join the upper corners of the latter. Sometimes the spaces left by the octagon at the angles of the square tower are occupied by the requisite portions of a flatter square pyramid; and in Germany the square tower is not unfrequently capped with a square pyramid, whose faces are opposite the angles of the tower, so that by their mutual intersection the sides of the tower are formed into gables, and the four slant sides of the pyramid into lozenges.

All these are simple artifices to soften the change of form; and they are farther assisted by the diminution of the tower upwards, occasioned by the gradually retiring faces of its successive stories, and producing together with the buttresses a gently pyramidal outline. This prepares the way for the more rapid convergence of the spire, and imparts a unity of character to the whole, which greatly surpasses in effect the violent although picturesque contrast between the upright, and frequently topheavy, Italian campanile and its spire.

After all, a correct notion of the arrangement and effect of an exterior is not to be conveyed

without drawings and individual descriptions, but of these there is fortunately no deficiency even for Italy. The principal Italian Cathedrals, Milan, Siena, Florence, Venice, and Pisa, have been very well represented in a work published at Milan; the edifices of Pisa, by Messrs. Cresy and Taylor, and those of Venice by Cicognara; these works are all illustrated on a large and accurate scale of architectural precision. The plates of Agincourt's great work contain an immense collection of Italian buildings, and much valuable information is to be found in the agreeable volumes of Mr Wood. Particular points have also received illustration from the valuable papers in the Archæologia, by Mr Kerrich, Mr Smirke, and others*.

Lastly, prints of the leading buildings may be purchased in most of the towns of Italy, and should not be neglected; for although they are often inaccurate in details, the general arrangement and effect is preserved, and a few notes of comparison between them and the actual edifices will prevent them from perpetuating erroneous impressions.

* Vide Appendix C.

CHAPTER X.

CONCLUDING SUMMARY.

THE various styles that immediately succeed the Classical, are distinguished from each other, principally by the different manner of using shafts, which in some styles are mere accessories, in others, real supporters of weight. Thus in the interiors of the Christian Roman and Pisan churches, the walls entirely rest on bearing shafts, and there are no compound piers. In the Romanesque of Lombardy and of the Rhine, compound piers are universal, and often alternate with bearing shafts; and in the south of France, the compound piers are used alone, and the bearing shafts employed are confined to the apsis. In the Byzantine, the principal feature of which is the mode of roofing by domes and waggon vaults, we find huge piers with their faces decorated with tiers of arches, but the shafts are confined to the support of decorative arcades, and hold no essential place in the mechanical structure, except in some smaller specimens; as at S. Fosca, Torcello, where they are placed under the arches that support the dome. There are no genuine compound piers, and the introduction of this

essential feature of the Gothic appears due, therefore, to one of the Romanesque styles. In the Early Norman, there is a much greater massiveness and rudeness than in any other; their builders are fond of employing bearing shafts of two or three diameters in height, and their piers when compound are more complex than those of their cotemporaries. Considered in the order of art, the Pisan style holds undoubtedly the first rank, from the classical beauty and elegance of their sculptured ornaments and mouldings.

Of all the Romanesque styles, that of the South of France appears to possess the most simplicity and plainness of decoration, and yet the greatest complication of plan. Here, too, pilasters are used in the interior, of so classical an appearance, that if these were not pretty universal, one should be tempted to believe them subsequent interpolations. They are fluted, sometimes with zigzag flutes, or else decorated with arabesques or sculptured mouldings: examples of them occur in the triforium and apsidal aisle of La Charité sur Loire, in the triforium of the choir at Lyons, and, I believe, at Autun and Clugny.

In the dispositions of the smaller shafts, the angle-shafts afford a ready characteristic; these I have shewn to be susceptible of two modes of application, as edge-shafts and nook-shafts. The first kind are used in the Byzantine, South of France and Norman styles, the second in the

Lombard, while in the Romanesque of Germany both kinds appear. The edge-shafts are introduced with much the greatest profusion in the Norman style, and to this belongs the introduction of them on the edges of the compound piers, where they are never placed in any other style. Hence arose a greater richness and multiplying of parts in the piers, which led the way to the elaborate compositions of the Early period.

Imposts afford another distinctive mark; the shafted, and perhaps the continuous impost are the only classical forms, and both are used in various styles of the Romanesque. In Italy, however, the banded impost appears to have been early adopted: in the Lombard buildings it is confined to the doorways, the shafted impost being employed about the piers and vaults; but in the Italian Gothic it is universal, completely superseding the latter. This banded impost may be found in the German Romanesque; and perhaps in the complete Gothic, cases may occur which appear to belong to the same class, but they are never so completely characterized as in the Italian examples.

On the other hand, the discontinuous impost is excluded from Italy, and, I believe, makes its first appearance on our side of the Alps in the Early period.

The complete Gothic appears to be further distinguished from the styles of the Romanesque and

Early periods, by the admission in compound arches* of an alternate mixture of imposts of different kinds, as shafted with continuous or with discontinuous. The Romanesque doors indeed have sometimes continuous arches in the lowest orders of the mouldings, and shafted or banded arches in the upper; but they never have one kind of impost between two of another kind in the successive orders, as is frequently the case in the complete Gothic.

Rich doorways appear, as far as I can judge, in all these styles, except the Christian Roman.

Of the Saracenic styles little is known, but I am inclined to give to this people the invention of the pointed forms of the arch, the ogee, and the practice of foiling arches; that they used these forms is certain, and the period of their introduction into Christian architecture corresponds nearly with that of the crusades and pilgrimages which directed attention to the East; while the features themselves are so striking and so easily recollected, that it is not surprising that men should endeavour to imitate them on their return to their own countries. Perhaps the ogee arch was brought in by the Venetians, in whose district it appears very early, and has always been prevalent.

Foliation, as a regular practice, appears to come from Germany, where early traces of it may be

* Compare, for example, the Decorated with the Early English arches in the choir at Ely.

found in the Rhenish churches, but I am by no means sure that the Pisans may not have a claim to it. Tracery is probably due to the Germans or French. Its value as a national characteristic has been sufficiently spoken of elsewhere.

With respect to the regular styles of the Gothic, England may claim the honour of inventing the Early English, the germs of which, however, are to be found in France; and I conceive the Decorated or Complete Gothic to be derived from Germany; from which country emanating, it superseded all the established styles in other countries, except Italy. The Perpendicular is our own, and heartily may we congratulate ourselves upon it, when we compare it with its sister styles in France and Germany.

The prevailing vice of these two styles is the excessive use of interpenetration amongst the mouldings: no moulding is allowed to stop or rest firmly upon a surface, but must always appear to pierce it, and, if possible, to make its appearance on the other side. The German and French have two different modes even of using this method, so destructive of all apparent stability, and of which some insignificant traces may be found in our own country.

It would require many drawings to make this subject intelligible. I have already said somewhat of the German examples, especially of their Stump Tracery, which is one branch of this prac-

tice; the Discontinuous Impost is another. This in England consists in little more than the addition of a few mouldings to the arch of a plain archway, without disturbing the course of the original lines, and therefore without breaking the connexions between the arch and its piers; in Germany and France, on the contrary, the lines of the pier are always studiously interrupted, as in Pl. III. Figs. 16, 17., and the arches appear ready to slip down the sides of the pier, having nothing to rest on or unite them with it.

In the German After Gothic, the favourite base appears to be a short cylinder decorated with spiral Doric flutes; sometimes two sets of these are placed one above another, one right-handed, the other left, and in other examples a kind of shallow reticulation is substituted. In the Flamboyant style, the bases exhibit the most extravagant interpenetrations. Sometimes in a compound pier there are two or three sets of bases alike in the succession of their mouldings, but one placed an inch or two above the other, and these being given to alternate shafts and ribs, are made to intersect and pass through each other; this base may also be found in the Netherlands. But the most extraordinary Flamboyant contrivance is the base of their discontinuous archways. In these such base-mouldings are applied to the pier, as if the arch-mouldings had been continued down its sides, and provided

with regular bases, and then the pier plastered up into its new form, and the base-mouldings left sticking out here and there, as it might happen.

In other cases, two or more different architectural members are placed on the same base, and made to interpenetrate each other through their entire height, in a way that bids defiance to description.

I do not consider these remarks on the derivation of the features of the Gothic style as absolutely certain, because many more observations and researches must be made before we can be at all qualified to trace such a history, and this sketch must rather be taken as illustrating the variety of sources from which I conceive the characteristic features of the Gothic to have been supplied, than as asserting the precise sources which furnished them.

The relative characters of the two leading styles of Architecture have been most ably summed up by Mr Rickman, in parallel columns*, and I shall venture to suggest a few additional ones, which have principally arisen from the preceding view of the subject. It will be seen at once that I do not agree with his seventh English principle; that the shaft bears nothing, and is only ornamental; as it appears to me to hold a most essential place in the Decorative support of the building.

* Vide Fourth Edition, p. 110.

MIDDLE AGE STYLES.	CLASSICAL STYLES.
Different planes of decoration placed behind each other to any number, and in every possible degree of variety even in a single member, as in an arch.	Different planes of decoration avoided, and never exceeding two in an entire composition.
Superincumbent weights divided into as many parts as possible, and then given to independent props.	Superincumbent weights united as far as possible, by resting on the horizontal cornice, which combines them into one mass.
Arch, the essential feature; its diagonal pressures studiously manifested, and the rest of the composition harmonized with them, by other inclined lines.	Arch, foreign to this style, and when introduced its diagonal pressure excluded from the decoration.
Every artifice of construction displayed.	Artifices of construction concealed, as impairing the simplicity of effect.
Chamfered surfaces universal; mouldings are applied to them, and may die against them or any other surface at at any angle.	Chamfered surfaces inadmissible, and mouldings can only stop against a surface perpendicular to their course.
Pannels are apertures between the parts of the Decorative frame of the building.	Pannels, mere superficial ornaments.

The Italian Gothic presents a curious mixture of these two characters; taking sometimes one side of the page, and sometimes another. Thus, beginning with Mr Rickman's Table;—The running lines are both horizontal and vertical;—arches essential;—no real entablature, but horizontal string-mouldings are so prominent and important, that they perpetually excite the idea of one;—shafts only support arch-mouldings;—flat pilaster-like surfaces continually occur, and mostly with square edges. The arch cannot be said to spring from a horizontal line, because its impost is always banded; there are no buttresses, and their pilaster-like substitutes are stopped by the horizontal cornice, which nevertheless breaks round them, and therefore cannot be said to rest upon them. When half turrets are employed, the horizontal mouldings break round them, and are never stopped by them. Again, the openings, although unlimited by the proportions of the column, have often the classical proportion; the bases are a bad Attic, and have pedestals; the mouldings Gothic without their chamfered surfaces; and the pannels mere superficial ornaments.

APPENDIX (A).

A LIST OF THE PRINCIPAL BUILDINGS

OF THE

MIDDLE AGES, IN ITALY, IN FIVE PARTS.

I. VENETIAN LOMBARDY, PARMA, AND MODENA.
II. TUSCANY, WITH GENOA AND MASSA.
III. STATES OF THE CHURCH.
IV. KINGDOM OF NAPLES.
V. SICILY.

A LIST of the following kind, however imperfect, is of the greatest use to a traveller; the objects it embraces are for the most part excluded from the common guide books, and unknown to the local ciceroni; and much valuable time must necessarily be lost in exploring every fresh town in search of them. The most extensive list that I have met with is that of Wiebeking, which embraces the whole world, from the earliest period to the present time; and is therefore, as may be supposed, of very unequal merit: but it is greatly to be desired that it should be corrected and completed in each country. I have endeavoured to do this for Italy, by taking his List as a ground-work, and correcting it by all that I could collect from the principal works that have been published, as well as from my own observations. The Roman numerals in the column of dates refer to centuries; but it must be observed, that both dates and names of Architects are so carelessly applied to the buildings of the Middle Ages in Italy, that little, or no dependance can be placed on them. The two columns allotted to them, contain merely those that are commonly given to the buildings in question. In the last column the names of Architects are printed in Roman characters, and those of Founders in italics.

I. VENETIAN LOMBARDY, PARMA, AND MODENA.

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Bergamo.	S. M. Maggiore		1134.	Fedro.
	Baptistery		1275.	
	S. Giulia	Lombard Church, in ruins.		
Near Bergamo	S. Tommaso, in limine	Lombard Round Church.		
Brescia	The old Cathedral		VI.	
Chiaravalle, a mile beyond Porta Romana, Milan	Church and Abbey	Commenced	1135.	
Como	Cathedral	Earliest Part	1013.	
		Addition commenced	1396.	Degli Spazii.
		——— carried on	1439—52.	
		West Front	1454—84.	
		Restored	XVIII.	Juwara.
Cremona	Cathedral	Commenced	1107.	
	Campanile	Called *il Torrazzo*	1284.	
	Baptistery			
Mantua	Chapels and Tower	Annexed to the Cathedral.		
	S. Andrea	Brick Tower		
Milan	S. Ambrogio	Founded	IV.	*Ambrosius, Bishop.*
		Repaired and the Court and Façade added	IX.	*Anspert, Bishop.*
		Dome restored	1196.	
	Cathedral	Founded	1387.	Enrico da Gamodia? (or Heinrich von Gemünden.)

		Cupola commenced.....	1490.	Omodeo.
		Its Pinnacle	1762.	Fr. Croce.
		West Front.....	1805—13.	C. Amati and A. Zanoja.
	S. Celso.....	Adjoining the Church of the Madonna di S. Celso	996.	
	S. Eufemia..	.....	XIV.	
	S. Eustorgio.....	.....	IV.	*Eustorgio, Bishop.*
		Enlarged.....	1278.	
		Interior modernized.....	1658.	Fr. Ricchini.
	S. Giovanni alla Conca...	Now a carriage warehouse.....	IX.	
	S. Gottardo	Tower near the Cathedral	1339.	
	S. Marco.....	.....	1254.	
	S. M. delle Grazie.....	Founded.....	1465.	
		Dome and Choir.....	1492.	Bramante.
	S. M. del Carmine.....	.....	1446.	
	S. Satiro.....	Attached to the Church of S. M. presso S. Satiro	869.	
	S. Simpliciano.....	.....	XI.	
	Piazza dei Mercanti.....	.....	1233.	
	Loggia degli Osii.....	.....	1316.	
Modena.....	Cathedral (S. Pietro).....	.....	1099.	
	Campanile	Called *la Ghirlandina*.....		
Monza.....	Cathedral.....	.....		
		West Front.....	XIV.	M. de Campione.
		Newly vaulted	XVII.	Pellegrini.
Murano, near Venice...	S. Donato	.....	XII.	

VENETIAN LOMBARDY, PARMA, AND MODENA.

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Padua.....	S. Antonio.....	Old Church of S. M. Maggiore, now the Chapel of Madonna Mora.....	XI—1110.	
		Present Church commenced.....	1231.	Niccolò Pisano?
		Carried on and finished..	1275—1300	Arnolfo Lapo?
		Oratory of S. George....	1377.	
		Dome restored.....	1394.	
	Baptistery, near the Cathedral.....	.....	XII.	
	Eremitani.....	.....	1264.	
	S. Niccolò.....			
	S. Sofia.....	.....	1123?	
	Salone.....	Commenced.....	1172.	P. di Cozzo.
		Completed.....	1209.	
Parma.....	Cathedral.....	.....	XI. or XII.	
	Baptistery.....	.....	1196.	B. Antelami.
		Completed.....	1260.	
	Campanile.....	.....	1284.	
Pavia.....	S. Agostino.....	Now a Magazine.....	VI. or VII.	
	S. Ambrogio.....	Ditto.....	VII.	
	S. Francesco.....	.....	XIII.	
	S. Giovanni in Borgo....	.....	VII. or VIII.	
	S. M. Deodata.....	.....	VII.	

	S. M. del Carmine, or S. Pantaleone	Fine specimen of brick-work	1373.	
	S. Michele		VI. or VII.	
	S. Pietro in Ciel d'oro	Now a Barn	VII.	
	S. Salvatore		VI. or VII.	
	S. Tommaso	Now Barracks	X.	
Near Pavia	Certosa	Commenced	1396.	E. di Gamondia.
		West Front	1473.	Ant. Fossano.
Piacenza	Cathedral		1117—XIII.	
	S. Francesco			
	S. Sabina		903.	
Reggio	Cathedral	Nearly destroyed by modernization		
Torcello near Venice	S. Maria, Cathedral		1008.	*Orso Orseolo, Bishop.*
	S. Fosca		IX.	
Trent	Cathedral		1212.	Ad. Aronjo.
Venice	S. Marc		1043—1071	
		Campanile	902.	
		Its upper story	XII.	Buono.
	S. M. dei Frari		1234.	Nicc. Pisano.
		Campanile	1361—96.	
	S.S. Giovanni and Paolo.		1246.	
	S. Caterina			
	S. Giacomo dell' Orio			
	S. Jacopo di Rialto	The first Church erected	421.	
		Repaired	1194.	
	S. Maria dell' Orto			
	S. Niccolò			
	S. Paolo			
	S. Stefano		1325.	

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Venice.—*Continued.*	Ducal Palace.....	Front next Canal, and six Arches round the corner	1350.	F. Calendarius.
		The rest of the Front ...	1423—39.	M. Bartolommeo.
		Central Window opposite Canal.....	1404.	
		Central Window in Piazza	1523.	
		Arches facing Scala dei Giganti.....	1471.	
	Porta della Carta	.....	1439.	M. Bartolommeo.
	Palazzo Foscari, &c.	About the same Date as the Porta della Carta.		
Verona.....	S. Anastasia.....	.....	1260—97.	
	S. Antonio vecchio.....	Now a Workshop.....	VI.	
	S.S. Apostoli	Consecrated.....	1104.	
	S. Bernardino.....	.....	1452.	
	S. Eufemia.....	Converted into Barracks.		
	S. Fermo Maggiore.....	Restored.....	1313.	
	S. Giov. in Fonte.....	Behind the Cathedral....	VII.	*Pacificus, Bishop.*
	S. Giov. in Valle.....	.....		
	S. Lorenzo	Adapted from a Temple of Venus	VI.	
		Enlarged.....	IX.	
	S. Maria Matricolare, (the Cathedral).....	.....	VIII.	*Pacificus, Bishop.*
		Enlarged.....	1453—71.	
	S. M. in Organo	.....	581.	

	S.S. Nazzaro e Celso.....	Last remodelling.....	1481.	
		.....	VI.	
		Reduced to present form	1446.	
	S. Pietro Martire.....	Near S. Anastasia.....	1353.	
	S. Pietro in Castello.....			
	S. Stefano.....	Destroyed by Theodoric, when restored unknown, (has a curious Apse).	524.	
	S. Trinita	.....	1115.	
	S. Tommaso.....	.....		
	S. Zeno, or Maria Maggiore.....	.....	VIII.	*Pacificus.*
		Campanile.....	1045—1178	*Martinus.*
	S. Zeno in Oratorio.....	Annexed to the Cloisters of the last.....		
	Tombs of the Scaligers...	.....	1329—75.	
Vicenza.....	S. Corona	.....		
	Cathedral.....	.....	1260.	
	S. Maria dei Servi	.....		
	S. Lorenzo.....	Now Barracks.....		
	Basilica	.....		
		Front added.....	1539.	Palladio.

II. TUSCANY, WITH GENOA AND MASSA.

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Arezzo.....	Cathedral.....	Original Building.....	XI.	
		Present one commenced..	1256.	
		Completed.....	1300?	Marchione.
		High Altar, and Ubertini Chapel.....	1280—90.	Giov. Pisano.
	Dominicans.....	.....	1245.	Nicc. Pisano.
	S. Maria in Grado.....	.....	XI.	
	S. M. della Pieve.....	.....	840.	
		Repaired, and the Front and Campanile added..	XIII.	Marchione.
		Cupola.....	XVI.	Vasari.
	S. M. dei Servi.....	.....	1286.	Giov. Pisano.
Carrara.....	Cathedral.....	.....		
Cortona.....	S. Francesco.....	.....	XII.	
	S. Margherita.....	.....	1297.	
Fiesole.....	S. Allessandro.....	.....	VI.	
	Cathedral.....	.....	1028.	
Florence.....	S.S. Apostoli.....	.....	VIII. or IX.	*Charlemagne.*
	Baptistery.....	.....	592.	
		Its external casing.....	1293?	A. Lapo?
	Badia di Settimo.....	Repaired.....	XIII.	N. Pisano.
		Cappella Maggiore.....	1285.	A. Lapo.
	S. Carlo.....	Opposite Orsan Michele..	1284.	
	S. Croce.....	.....	1249.	A. Lapo.
		Completed.....	XIV.	Giotto da Vespignano.

	S. Maria del Fiore, (Cathedral)	Commenced	1298.	A. Lapo, or Arnolfo di Cambio da Colle.
		Carried on	1332—1419	Giotto, T. Gaddi, Orgagna, and Filippo di Lorenzo.
		The Dome	1420—34.	Brunelleschi.
		Campanile	1334.	Giotto.
	S. Maria Maggiore	Enlarged	XII.	Buono.
	S. Maria Novella		1278.	Ristoro da Campi, and Talento Nepozano.
		Part of the West Front	1470.	L. B. Alberti.
	S. Miniato al Monte		XI.	*Hildebrand, Bishop.*
	Orsan Michele	Built as a Granary	1284.	A. Lapo.
		Converted into a Church by the tracery, &c.	1337.	T. Gaddi.
		Chapel of the Madonna	1348.	A. Orgagna.
		——S. Anna	1349.	A. Orgagna.
	S. Remigio			
	S. Stefano		XI.	
	S. Trinita		1250.	Nicc. Pisano.
		Doors and Windows altered	1593.	Buontalenti.
	Palazzo vecchio		1298.	A. Lapo.
	Loggia de' Lanzi		1355.	A. Orgagna.
Near Florence	Certosa	On the road to Siena	1314.	A. Orgagna.
Genoa	S. Lorenzo (Cathedral)		989—1199.	
		Enlarged, and the West Front added	1260.	
		Choir and Cupola	XVI.	
	S. Agostino	Now a Manufactory		

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Genoa.—*Continued.*	S. Donato		XI.	
	S. Matteo		1125.	
	S. Maria di Castello		XI.	
	S. Maria delle Grazie		XI.	
	S. Stefano		XI.	
Lucca	S. Martino (Cathedral)		1060—70.	
		Upper part of West Front	1204.	Giudetto.
		Additions and Alterations	1308—20.	Giov. Pisano.
	S. Michele		811.	
		West Front	1070.	
		Vault of the nave	XVI.	
	S. Cristoforo			
	S. Frediano			
	S. Giusto			
	S. Giovanni	Near the Cathedral		
	S. Maria in Forisportam			
	S. Pietro Somaldi			
Pietrasanta	Cathedral			
Pisa	Cathedral		1063.	Buschetto.
		Pulpit	XIV.	Giov. Pisano.
	Baptistery	Commenced	1153.	Diotisalvi.
		Carried on	1278.	
		Gothic work added	XIV.	
		Pulpit	XIII.	Nicc. Pisano.

	Campo Santo	Commenced	1278.	Giov. Pisano.
		Finished	1283.	Aretino.
	Leaning Tower		1174.	Guglielmo d'Inspruk
				Bonanni Pisano.
		Upper story	XIV.	Tommaso.
	S. Maria della Spina		1230.	Nicc. Pisano.
		Spires and Pinnacles	XIV.	
	S. Andrea		1100.	
	S. Caterina		1250?	Nicc. Pisano.
		West Front	XIII.	F. Guglielmo.
	S. Francesco		1250.	
	S. Frediano		XI.	
	S. Martino		1332.	Andr. Pisano.
	S. Matteo		1027.	
	S. Michele in Borgo		1018.	Buono.
		West Front	1262.	
	S. Niccola		XI.	
		Campanile	XIII.	Nicc. Pisano.
	S. Paolo a ripa d'Arno	Existed	VIII.	
		Enlarged and improved	1100.	
	S. Pietro in Vincoli		1072.	
		Improved	1100.	
	S. Sepolcro		1153.	Diotisalvi.
Pistoia	S. Andrea		1166.	Gruamonte or Buono.
		Pulpit	1296—1300	Giov. Pisano.
	Baptistery		1300—37.	Andr. Pisano.
	S. Bartolommeo		VIII.	
		West Front	1167.	Rodolfino Steinhauer.
		Pulpit	1250.	Bartolommeo.
	Cathedral		1240.	Nicc. Pisano.
		Vaulting	1298.	Giov. Pisano.
		Campanile	1301.	

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Pistoia.—*Continued.*	Dominicans		1284.	Giov. Pisano.
	S. Francesco		1294.	Elia Coppi.
	S. Giovanni Evangelista		1150.	Buono.
		Pulpit	1286.	Giov. Pisano.
	Chapel of S. Jacopo.			
	S. Lorenzo		1278.	
	S. Maria Nuova		1266.	Bonus.
	S. Paolo		1032.	Buschetto.
	S. Pietro	West Front	1263.	Bonus.
	S. Salvatore		x.	
		Repaired	1150.	Buono.
		West Front	1270.	Benvenuto.
	Town Hall		1295.	
Prato	Cathedral		1312.	Giov. Pisano.
	S. Domenico		1283.	Giov. Pisano.
	S. Francesco		xiv.	
Quirico	Church	Second side porch	1295.	
Siena	Cathedral	Consecrated	1180.	
		Chapel of S. Giovanni rebuilt, and east end of Cathedral added	1243.	
		Additional Nave commenced	1243.	
		This last abandoned, on account of settlement	1321?	
		West Front	1339.	
		Papal Cornice introduced	1400.	
		Campanile raised higher	1389.	

	S. Domenico	Choir	1361.	
	Fonte Branda		1193.	
	Palazzo Vecchio		1290.	
		Enlarged and altered	1325—7.	Agostino and Angelo.
	Torre del Mangia		1325.	
	Spedale			
	Casino de'Nobile		1309.	
		Restored and altered	1763.	
	Palazzo Bonsignore	Good Terracotta Front		
Volterra	Cathedral	Enlarged	1254.	Nicc. Pisano.
	Baptistery		IX.	

III. STATES OF THE CHURCH.

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Ancona	S. Ciriaco, (Cathedral)		XI.	Marchione.
	S. M. della Piazza Collegiata		XI.	
Assisi	S. Chiara		1253.	F. da Campello.
	S. Francesco	Church and Convent.		Lapo? and Campello.
		Completed	1230.	
		Consecrated	1253.	
	S. Rufo (Cathedral)	Crypt	1028.	
		Church	1130—40.	G. da Gubbio.
	Portiuncula	Cell in which S. Francis died in 1226, has pointed Arches		
	The House in which S. Francis was born, 1182.	Inclosed under the Ch. of S. M. degli Angioli. It has pointed Arches mixed with circular		
Bologna	S. Stefano	A group of six Churches	V.	
	1. S. Sepolcro	Round Church	IX.	
	2. S. Peter and S. Paul			
	3. S. Stefano			
	4. S. Lorenzo	Crypt		
	5. S. Trinita			
	6. Corte di Pilato	Originally a Cloister	1390.	
	S. Petronio	Commenced		
		Carried on by various Artists	XV—XVIII.	

	S. Giacomo Maggiore...	.....	1267.	
		Vaulted.....	1497.	
	S. Giovanni in Monte....	.....	1221.	
		Campanile.....	1286.	
	S. Martino.....	.....	1313.	
	Foro de' Mercanti.....	.....	1294.	
	Tower of the Asinelli....	.....	1403.	
	——— Garisendi...	.....	1110.	
	Palazzo del Podesta.....	.....	1201.	
		Tower.....	1264.	
	Palazzo Mag. del Pubblico	.....	1222—90.	
	Palazzo Pepoli	.....	1344.	
Chiaravalle, (bet. Ancona and Sinigaglia.)	S. Bernardo (Cathedral)..	(Has pointed Arches)...	1172.	
Città Castellana.....	Cathedral.....	.....	XIII.	
Corneto.....	S. M. in Castello.....	.....	XII.	
Ferrara.....	Cathedral.....	.....	1135.	
Foligno.....	Cathedral (S. Feliciano)..	(West Front only.)		
	S. Domenico	.....		
	S. Salvatore (and others).	.....		
Between Foligno and Spoleto	Chapel	Altered from a Rom. Temp.		
Immola.....	S. Francesco.....	.....	XIV.	Ag. and Ang. di Siena.
Loreto...	Ch. della Santa Casa.....	.....		
Montefiascone.....	S. Flaviano	.....	1030.	
		Restored, with pointed Arches.....	1262.	
Narni.....	Cathedral.....	.....	XIII.	
Orvieto.....	Cathedral	.....	1200.	Maitani.
		West Front.....	1214.	
		Sculpture about it	1270?	Nicc. Pisano.

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Orvieto.—*Continued.*	Baptistery		1400.	Anzano.
	S. Michele			
	Bishop's Palace		1417.	
Perugia	Cathedral		1300.	Bevignate.
	S. Domenico	(Altogether modernized, except the West End.)	1304.	
	S. Ercolano		1297—1325	
	S. Giuliana		1292.	
	S. Gregorio		1361.	
	S. Pietro Martire, S. Agostino, S. Angelo, Chiesa del Monte, S. Maria Nuova, S. Martino del Verzaro and S. Bernardino.	Have ancient portions worth examining.		
	Palazzo pubblico		1333.	Bevignate.
Ravenna	S. Apollinare in Classe, 3 miles from Ravenna.	Consecrated	549.	
	S. Apollinare Nuovo		V.	
	Baptistery		IV.	
	S. M. della Rotonda	Mausoleum of Theodoric	V.	
	S. S. Nazzaro e Celso	Sepulcre of Galla Placidia	V.	
	S. Vitale		VI.	
	S. Spirito		VI.	
	S. Francesco		V.	

	S. Agata Maggiore.....	.....	417.	
	S. Giovanni della Sagra..	.....	425.	
	S. M. in Cosmedin.....	.....	v.	
	Façade of Franciscan Convent.....	Palace of Theodoric.....	v.	
Rimini.....	S. Francesco.....	.....	xii.	
		Transformed.....	1447—50.	L. B. Alberti.
	S. M. in acumine.....	.....	1373.	
	Portico of pointed Arches	In Piazza Grande.....	1204.	
Rome.....	S. Adriano, in Campo Vaccino	The Basilica Emilia.....		
	S. Agnese fuori delle mura	.....	iv.	*Constantine.*
	S. Agostino.....	.....	1483.	Baccio Pintelli.
	S. Antonio Abate, near... S. M. Maggiore.....	.....	1191.	
	Ara Cœli.....	.....	iv.	
		Mausoleum Sarelli	1260.	
	Baptistery of Constantine, near the Lateran.....	.....	364?	
	S. Bartolommeo in Isola	.....	x.	
	S. Bernardo	An apartment of the Baths of Diocletian	363.	
	S. Bibiana.....	.....		
	S. Cecilia in Trastevere..	.....	230.	
		Altered and repaired ...	vi. 821.	
		Tower	ix.	
	S. Clement	Best preserved example of the arrangement of the primitive Churches.	v. or vi.	

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Rome.—*Continued.*	S. Costanza, near S. Agnese.....	Round Church		*Constantine.*
	S. S. Cosmo and Damiano	A Temple of Remus.....	IV.	
	S. Croce in Gerusalemme	.....	IV.	
	S. Giorgio in Velabro...	.....	IV.	
	S. Giovanni in Laterano..	.....	324.	*Constantine.*
		Burnt down and immediately rebuilt.....	1308.	
		Cloister.....	XII. or XIII.	
	S. S. Giovanni and Paolo.	.....	IV.	*Pammachus*, Bishop.
		Repaired.....	494.	*Symmachus*, Pope.
	S. Giovanni a Porta Latina	.....	VIII.	*Adrian* III.
	S. Grisogono in Trastevere.....	.....		
	S. Lorenzo fuori delle mura.....	Restored by Pelagius II. and enlarged by Adrian I. and by Honorius II. who added the Nave.	.....	*Constantine.*
	S. Lorenzo in Miranda	Temple of Antoninus and Faustina		
	S. Marco.....	.....	833—1468.	
	S. Maria ad Martyres....	The Pantheon		
		Consecrated	608.	*Boniface* IV.

S. Maria in Cosmedin....	*La Bocca della Verità*.....	722.	
S. Maria degli Angeli....	Formed out of the Baths of Diocletian	XVI.	Michael Angelo.
S. Maria in Domnica.....	.....		
S. Maria Egiziaca	The Temple of Manly Fortune		
S. Maria Maggiore.....	Founded	352.	
S. Maria sopra la Minerva	The only Gothic Church in Rome.....	1375.	
S. Maria del Popolo.....	.....	1277.	
S. Maria in Trastevere...	.....	1139.	
S. Martino in Monti.....	.....		
S. Michele in Sassia.....	In Borgo S. Spirito on the left, close to the beginning of the Colonnade of St. Peter...	IX.	*Charlemagne.*
S. Nereo ed Achilleo.....	.....	524—1595.	
S. Nicola in Carcere.....	Temple of Piety		
S. Pancrazio.....	.....		
S. Paolo fuori delle mura	.....	386—95.	*Constantine.*
	Severely damaged by fire	1823.	
	Cloister.....	XII. or XIII.	
S. Pietro in Carcere.....	The Mamertine Prison...		
S. Pietro in Montorio....	.....		
S. Pietro in Vincoli.....	.....	442.	
	Rebuilt	VIII.	*Adrian* I.
S. Prassede.....	.....	II. and IX.	
S. Prisca.....	.....	280.	
S. Pudenziana	.....	III.and1130	
S. S. Quattro Coronati ...	.....	VII.	
S. Saba.....	.....	IV.	
	West Front.....	770.	

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Rome.—*Continued.*	S. Sabina.		425. 824. and 1238.	
	S. Stefano Rotonda	A round Temple, or covered Market, consecrated	470.	*Simpliciano*, Pope.
	S. Teodoro	Temple of Romulus		
	S. S. Trinità de' Monti			
	S. Urban alla Caffarella	Brick Temple, about two miles from Porta Sebastiana		
	S. Vincenzio alle tre Fontane		630 & VIII.	
	Casa di Crescentio		XI.	
	Chapel at Capo di Bove	A mile from Porta Sebastiana	1296.	
San Leo	Cathedral	Restored with pointed Arches	1173.	
Spello	Chapel	By the road side		
Spoleto	Cathedral	West Front only retained		
	S. Niccolò	Now a Barrack		
	Church of 1100 Virgins			
Subiaco, 45 miles from Rome	Monastery of the Sagro Speco	Rebuilt	847.	
		Inferior Church	1053.	
		Superior Church	1066.	
		Cloister	1235.	
	Monastery of S. Scolastica	Church restored	981.	
		Cloister	1052.	

Tivoli.....	S. Andrea.....	.....	v.
	Carità.....	.....	v.
Terni.....	S. Francesco.....	.....	
	S. Salvatore.....	Ancient round Temple...	
Terracina.....	Cathedral.....		
	Palace of Theodoric.....	Ruins on the Hill above the Town	
Viterbo.....	Cathedral.....	.....	
	S. Francesco.....	.....	
	Frati Predicatori.....	.....	
Vicovaro	S. Giacomo.....	Near Tivoli.....	

IV. KINGDOM OF NAPLES.

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Bari	Cathedral		XII.	
	S. Nicola		1197.	
Capua	Cathedral			
Fondi	Cathedral			
	Buildings and Chapel	At the Gate towards Naples		
Foggia	Cathedral	With Lombard remains.		
Nocera dei Pagani	S. M. Maggiore	An ancient Round Temple		
Naples	S. Chiara		1328.	Masuccio II.
		Monument of King Robert		
	S. Domenico Maggiore		1284.	Masuccio I.
	S. Giovanni da Carbonara		XIII. & XIV.	Masuccio I. and II.
		Monument of Ladislaus	1414.	
	S. Giovanni Maggiore			
	S. Lorenzo and monastic Buildings	Founded	1254.	
		Carried on by		N. Pisano, Maglione, and Masuccio II.
	S. Maria Nuova		1284.	Giov. Pisano.
	Cathedral	Rebuilt	1280.	*Charles* I.
		Completed	1299.	*Charles* II.
		West Front	1407&1788.	

	S. Restituta	The original Cathedral, now annexed to the North side of the present one	
	S. Pietro Majella.....	.....	
	Incoronata.....	Has a good West Doorway.	
	S. Eligio.....	.....	
Otranto.....	An ancient Church.....	.....	
Salerno	Cathedral.....	.....	
S. Germano.....	S. M. delle cinque torri ..	.....	VIII.

V. SICILY.

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Catania	Cathedral		1154.	*Roger* I.
Cefalù	Cathedral		1146.	*Roger* I.
	House of Roger			
Messina	Cathedral	Norman		
Monreale, 4 miles from Palermo	Cathedral	Has pointed Arches	1174.	*William* II.
Palermo	Ziza			
	Cooba, or Casteddu			
	Small domed Building in the Garden adjoining the Ziza, a remnant of the Alcassar, or Emirs Palace.	Saracenic (Vide Smirke, Arch. XXI.)	IX. to XI.	
	Chapel of Royal Palace		1132.	*Roger.*
	Ch. della Martorene	Has pointed Arches	1113.	*Antiochene.*
	Cathedral		1185.	*William* II.
	S. Niccolò della Kalsa			
	S. Francis		1302.	
	Palazzo de' Tribunali		1307.	

NOTE, ON SUBIACO.

M. Seroux d'Agincourt has taken pains to prove that the pointed arch was used in the Abbey of Subiaco, near Rome, so early as 847; and the buildings to which he wishes to give so high an antiquity are certainly vaulted with pointed vaulting, inserted into an excavation of the rock. Immediately contiguous to them, and opening to them by a staircase in the rock, is a building of two stories, each a Church; the lowest, vaulted with plain Roman vaulting in three compartments, exhibits no symptom of the pointed arch; this was founded in 1053, according to Muratori. Above this, forming the second story, is a Church having pointed vaulting, and according to the Chronicle, founded in 1066.

As the pointed arch is not introduced in the lower Church of 1053, it is most probable that the pointed vaulting of the excavated buildings belongs to the latter era. For the notion of their earlier date only rests on the vague expression of the Monastic Chronicle, that their buildings, after having been greatly damaged and almost destroyed, by the incursions of the Lombards and Saracens in the seventh and eighth century, were entirely repaired about 847, by Peter the Abbot.

Again, the vaulting of a Church was so often added long after its completion, that it is extremely hazardous to infer its date from that of the recorded foundation of the building merely. But the pointed arch appears only in the vaults of these buildings, and of the neighbouring Church of S. Scolastica, (981), and not in their apertures, or affecting their style; which, judging from Agincourt's plate, may belong to any early period: it appears necessary therefore to examine this example with the greatest care, before we yield our assent to the opinion of its great antiquity, contradicting as it does all other evidence. I have inserted these remarks in hopes of inducing some one to visit these buildings, which I had no opportunity of doing.

V. SICILY.

PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Catania.....	Cathedral.....	.....	1154.	*Roger* I.
Cefalù.....	Cathedral.....	.....	1146.	*Roger* I.
	House of Roger.....			
Messina.....	Cathedral.....	Norman.....		
Monreale, 4 miles from Palermo	Cathedral.....	Has pointed Arches.....	1174.	*William* II.
Palermo.....	Ziza.....			
	Cooba, or Casteddu.....			
	Small domed Building in the Garden adjoining the Ziza, a remnant of the Alcassar, or Emirs Palace.	Saracenic ..... (Vide Smirke, Arch. xxi.)	ix. to xi.	
	Chapel of Royal Palace..	.....	1132.	*Roger.*
	Ch. della Martorene.....	Has pointed Arches.....	1113.	*Antiochene.*
	Cathedral.....	.....	1185.	*William* II.
	S. Niccolò della Kalsa...	.....		
	S. Francis.....	.....	1302.	
	Palazzo de' Tribunali ...	.....	1307.	

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PLACES.	BUILDINGS.	PARTS OF BUILDINGS AND REMARKS.	DATE.	ARCHITECTS AND FOUNDERS.
Catania	Cathedral	.....	1154.	*Roger* I.
Cefalù	Cathedral	.....	1146.	*Roger* I.
	House of Roger			
Messina	Cathedral	Norman		
Monreale, 4 miles from Palermo	Cathedral	Has pointed Arches	1174.	*William* II.
Palermo	Ziza			
	Cooba, or Casteddu			
	Small domed Building in the Garden adjoining the Ziza, a remnant of the Alcassar, or Emirs Palace.	Saracenic (Vide Smirke, Arch. XXI.)	IX. to XI.	
	Chapel of Royal Palace	.....	1132.	*Roger.*
	Ch. della Martorene	Has pointed Arches	1113.	*Antiochene.*
	Cathedral	.....	1185.	*William* II.
	S. Niccolò della Kalsa	.....		
	S. Francis	.....	1302.	
	Palazzo de' Tribunali	.....	1307.	

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APPENDIX (B).

DIMENSIONS OF THE PRINCIPAL ITALIAN CAMPANILES.

	English feet.	Proportion of height to base.
Cremona, *il Toraccio*.....	396	
Square part $\frac{2}{3}$ of whole height.	.....	6
Venice, *S. Marc*.....	350	
Square part $\frac{3}{4}$ of whole height.	.....	6
Siena, *Torre del Mangia*.....	338	
Modena, *La Ghirlandina*.....	315	
Bologna, *Torre Asinelli*.....	312	12
Florence, ...	273	6
Parma, ...	256	8
Siena, *Cathedral*.....	210	8
Pisa, *Leaning Tower* (*circular*)	178	8
Lucca, ...	177	
Bologna, *Torre Garisendi*.....	161	
Rome, *S. M. in Cosmedin*.....	110	7
Pisa, *S. Niccola*	109	5

These heights are variously stated by different authorities. I have principally reduced them from Wiebeking.

APPENDIX (C).

LIST OF ILLUSTRATED WORKS ON THE MIDDLE AGE BUILDINGS OF ITALY.

Histoire de l'Art par les monumens, par J. B. L. Seroux d'Agincourt, 6 t. fol. Paris, 1823.

The same translated into Italian, by S. Ticozzi, 6 vols. 8vo., with a folio atlas of plates. Prato, 1826.

Les Eglises principales de l'Europe, folio, with many plates; contains for Italy, the Cathedrals of Milan, Pisa, Florence, Venice, and Siena, besides S. Peter, the Pantheon, and the Lateran at Rome, and the Superga at Turin. Published at Milan.

Architecture of the Middle Ages in Italy, (illustrated by the edifices of Pisa), by E. Cresy, and G. L. Taylor. London, 1829.

Le Fabbriche più cospicue di Venezia; Cicognara, Diedi, e Selva, 2 t. fol. Venezia, 1815.

L'Augusta Ducale Basilica dell' Evangelista S. Marco di Venezia. Ven. 1761.

Il Canal Grande di Venezia, e La Piazza di S. Marco; da A. Quadri. Ven. 1831.

La Metropolitana Fiorentina illustrata. Fir. 1820.

Voyage Pittoresque, ou Description des Royaumes de Naples et de Sicile. Paris, fol. 1783.

I Monumenti piu interessanti di Roma, dall' X° secolo sino al XVIII°, da L. Rossini, fol. Roma, 1818.

Monumenti della Religione Cristiana, da J. G. Gutensohn ed I. M. Knapp, fol. Roma, 1822.

Denkmaeler der Baukunst in Italien, von J. E. Ruhl, fol. Darmstadt.

Edifices de la Decadence, Partie II. du Supplement aux Journées Pittoresques des Edifices de Rome Antique, par l'Abbé Uggeri. Rome, 1809.

Wiebeking, Tables appartenant à l'Architecture Civile, 1 t. 4to. 1831.

Wiebeking, l'Architecture Civile, 7 vols. 4to. (this I have not seen, but have reason to believe that it contains an extensive collection of Italian buildings).

Letters of an Architect. J. Woods. 2 v. 4to. 1828.

Archæologia, contains several papers on Italian Gothic Buildings; the principal are, Kerrich on Gothic Architecture, Vol. XVI.; on Italian Sepulchral Monuments, Vol. XVII., and on the Vesica Piscis, Vol. XIX.; Taylor on Gothic Ornaments at Pisa, Vol. XX.; Repton on moulded Brickwork, Vol. XXI.; Smirke on Palermo, Vol. XXI.

DESCRIPTION OF THE PLATES,

WITH SOME ADDITIONAL REMARKS.

PLATE I.

Fig. 1. AN isometrical sketch of one of the great halls of the Baths at Rome, dissected to shew the relation of the interior to the exterior, and illustrating the origin of many of the parts of the Gothic Cathedrals, as the naves and side aisles, clerestory, triforium and flying buttress, (page 67).

Fig. 2. An isometrical drawing, half section, half plan, of the temple of Venus at Baia, the section being made diagonally across the plan. Fig. 3., a half plan taken at the level of *de*, (page 70).

Fig. 4. A similar dissection of the church of S. Miniato, near Florence, to explain a construction of churches peculiar to Italy, (page 88), which are flat roofed, but strengthened by cross walls. This figure also shews the arrangement of the crypt in ancient Italian churches, (page 136). The west front of this church is in the original highly decorated with marbles. (Agincourt has given a figure of it. Pl. LXIV. Fig. 11.)

PLATE II.

This Plate contains a set of diagrams of vaults, in which I have used the method employed by Mr Ware in his excellent Essays on that subject, to which my chapter on vaulting may be regarded as a supplement. Figs. 1—4., shew the ways of vaulting a rectangle with quadripartite vaults. Fig. 1., in the subordinate apartments of the Roman baths, and in their villas, where the cross vault is sometimes placed at one extremity of the room, (page 72). Fig. 2., the great roofs of the Baths of Caracalla and Diocletian; vaulted with semicircular waggon-vaults in both directions, unequally stilted to bring their apices to the same height; this produces the waving form of the groin, which appears on the plan at *aec*, *bed*, (page 73). Figs. 3, 4., parallelograms vaulted with pointed vaults, the former by employing domical vaulting cells, the latter by stilting the vaults unequally; the first is the prevalent practice in Italy, and perhaps in Early German work, the latter in France and England, but each is used with a slight mixture of the other, (page 77). Figs. 5, 6.

The sexpartite and quinquipartite vaults of the Certosa near Pavia, (page 78). Fig. 7. A common vault in Italian churches, which is a dome on a square base placed diagonally with respect to the plan of the apartment. This, when provided with diagonal ribs, appears to be an ordinary quadripartite vault, with domical vaulting cells, (page 77). Fig. 8. The favourite French Gothic vault, (page 83). Fig. 9. One of the prevalent After Gothic vaults of Germany, (page 84). Fig. 11. Plan, as a specimen of another late German vault, (page 85).

Fig. 10. Pendentive of the Middle Ages to contrast with that of the Byzantine style, which is a portion of a spherical surface, (page 136).

Plate III.

Imposts. (P. 28.) Fig. 12. The Shafted Impost; 12 *a*, its plan. Fig. 13. The Banded Impost; 13 *b*, its plan, from the Cathedral, Lucca. Fig. 14. The Continuous Impost from St Pierre, Avignon; it also exhibits the interpenetration of mouldings between the vaulting ribs, which is a favourite device in the After Gothic of France and Germany. This sometimes occurs in England, as in the chancel of St Mary, Beverley, (vide Sir J. Hall, Pl. xxxix.) Fig 15., the Discontinuous Impost from La Chapelle at Brussels.

Fig. 16. A Discontinuous Banded Impost from Dreux in Normandy, very often occurring in the Flamboyant style. Fig. 17. A Discontinuous Corbeled Impost from the Frauenkirche at Frankfort on the Maine, of a kind very common in the German After Gothic. Fig. 18. One of the arches of the unfinished cloister of S. M. Novella at Florence.

Fig. 19., *abcd*, half section of the great arch of S. Lorenzo at Naples, (page 38), *ABCD* half plan of its pier; this, which is one of the Angiovine specimens, has a good Gothic profile.

Figs. 20—23. Piers.

Fig. 20. a Romanesque pier from the Cathedral at Valence, (page 90).

Fig. 21. ..... from S. Zeno, Verona, (page 93).

Fig. 22. ..... from the Cathedral at Trent, (pages 93 and 107).

Fig. 23. a Norman or Early Gothic pier, from the Cathedral at Geneva, (pages 87 and 104).

Fig. 24. Bases. The most universal base in Italy, is a travestie of the Attic, consisting like that, of two rounds and an intermediate hollow with fillets between, but having these members

placed in all manner of ways with respect to projection and inclination. I have here set down a few only of these varieties; thus *a* occurs at S. Giovanni, Siena, *b* at S. Caterina, Pisa, *c* at S. Stefano, Genoa, *d* in the nave at Siena, *e* along its west front.

i is the common base of the Complete Gothic shafts, and this appears to be formed from the same Attic base, by omitting the fillets. Examples occur also confirming this view, in which but one is omitted; thus *f*, from the north door of S. Fermo at Verona, has only the lower one; and *g*, from the west door of the Incoronata at Naples, the upper one. *k* as a plinth-moulding, is used in the Gothic of Italy, but I have not there met with *l* or *m*, the favorite base-mouldings of the Gothic on our own side of the Alps.

Sometimes bases are made up of three rounds, with two intermediate hollows with fillets, as at S. Antonio, Rome; and S. Giovanni Maggiore, Naples.

The piers of the Italian Gothic have pedestals arranged like the classical, into base, dado and cornice, as in S. Trinita at Florence, Pl. v. Fig. 3.; but the mouldings always mitre round projections, and sometimes give the circular shafts an octagon plinth, as in the Complete Gothic; nevertheless the mixed base of the latter style in which some only of the mouldings are selected for basing, and others die on a plain slope, is foreign to Italy.

Fig. 25. String Mouldings. These in the Italian examples are for the most part classical. One resembling the prevalent Gothic moulding, Fig. *g*, is very common, but with this difference, that its upper fillet is vertical, as in Fig. *d*.

b occurs at Modena Cathedral; *c* in the apse of the Lateran; *d* at Orsan Michele, Florence; *e* at Siena; *f* at S. Trinita, Florence; and in fact, mouldings are to be found in every shade of form from the classical bead *a* to the ogee *f*.

g, *h*, *i* are the Gothic forms of the same, but *g* may be found at Siena and elsewhere in Italy; *k* is from Orsan Michele, *l* from S. Corona, Vicenza, *m* from S. Gio. in Monte, Bologna.

These mouldings are often accompanied with rows of small shallow dentils, and carved with classical ornaments, as in Pl. xiii. The small dentils especially are used universally in the Italian Gothic, and even in earlier specimens, such as the exterior of S. Marc at Venice.

Fig. 26. Diagonal Vaulting Ribs.

a From the church of the Grazie and S. Eustorgio, Milan; Foro dei Mercanti, Bologna; S. Pantaleone, Pavia.

b Cathedral, Verona; S. Domenico, Foligno; S. Stefano, M. dell Orto, Frari, Venice; S. Corona and Servi, Vicenza; Anastasia, Verona; chapels in Duomo, Vicenza; S. Francesco, Terni; and

side a. S. M. sopra Minerva, Rome; (also Cathedral Mayence and N. D. de Grace, Arles).

c S. Giovanni and Paolo, Venice; choir and side aisle S. Antonio, Padova.

d S. Pietro Majella, Naples.

e Cathedral, Siena, (with side dentils); (also Cathedral, Mayence).

f Nave, S. Giovanni and Paolo, Venice; Duomo, Vicenza.

g Additional nave and Spedale, Siena.

h Cathedral, Trent.

i Cathedral, Lucca; S. Domenico, Siena; S. Martino, Bologna; Certosa, S. Remigio, S. M. Maggiore, S. Trinita, Florence; Cathedral, Perugia.

k The Gothic form of the last, and not to be found in Italy; the former has a plain chamfer, this a hollow one.

l Cathedral, Loggia Lanzi, Certosa, Orsan Michele and S. M. Novella, Florence; this is *i* with a flanking moulding. *i* and *l* belong to the complete Italian Gothic.

m S. Restituta, Cathedral and Chapter-house of S. Lorenzo, Naples.

n Apsidal Aisle-chapels of S. Lorenzo, Naples.

o S. Chiara, Naples. These three last, which are not found in the Italian Gothic, may serve to shew that the Neapolitan Churches are of a different character from them, and belong to the French Gothic.

p Side-aisle S. Giovanni in Monte Bologna; S. M. Novella, Florence.

q Crossing compartment, S. M. Novella, Florence; (as a transverse rib.)

r, *s*, *t* Gothic forms not used in Italy, but very common in German After Gothic.

Besides these, the plain square-edged ribbon of the Romanesque is used in S. Ambrogio, Milan, and in the Cathedral at Parma; and *a* with a fillet on its face at the Certosa, Pavia.

Fig. 27. A band of pannelling in terracotta, from a window in the west front of S. Stefano, Venice. These bands are very usual in districts where terracotta is made use of, principally in the north of Italy, and exhibit great variety and beauty of design. *l*, *m*, *n*, *o*, mark the places of the joints.

Plate IV.

Fig. 1. One compartment of the nave of S. Ambrogio, Milan.

Fig. 2. The upper part of the nave in the Cathedral at Avignon.

Fig. 3. The simplest form of a compound arch. (page 26.)

Figs. 4 to 8. Various ways of placing *shafts* about arches,

(page 34.) Fig. 4. has sub-shafts; Fig. 5. a bearing-shaft; Figs. 6 and 7. edge-shafts; Fig. 8. nook-shafts.

Fig. 9. An arch from the apse of the Cathedral at Murano, near Venice. This has a sub-arch upon corbels, and is stilted. The whole is of brick-work.

Fig. 10. A corbel table in terracotta, from a Chapel of S. Eustorgio, at Milan.

Fig. 11. A corbel table from Monza, near Milan.

Plate V.

Fig. 1. A compartment of the nave of S. Pierre, Geneva, or rather one of its vaulting piers, to explain the nature of vaulting systems in general. (page 86.)

Fig. 2. A compartment of the nave of the Cathedral at Valence. (page 91.)

Fig. 3. A compartment of the nave of S. Trinita, at Florence, (1250). This church is remarkable for its elegant harmonious proportion, simplicity, and curious mixture of Italian and classical principles.

Fig. 4. Roman vaulting from the Piscina of the Villa Cardito, near Naples, (page 81).

Fig. 5. Roman vaulting from the Piscina Mirabile, near Baia, (page 79).

Plate VI.

One compartment of the nave of S. Petronio at Bologna. This possesses in a high degree the various peculiarities which characterize the arrangements of the Italian Gothic, such as the wide and low pier-arches whose span equals the breadth of the nave, the absence of the triforium and of the clerestory string, the great empty circles which occupy the space of the clerestory, the excessive doming of the vaults, the shallowness of the side aisles, the heavy capitals which surround the piers and half-piers like a band of leaves, and the squareness of the piers with their nook-shafts; all these serve to make a wide distinction between this example and those of the genuine Gothic; and they are rarely found so completely united even in Italian churches. It will be seen that each compartment of the side aisle has two arches which open into shallow chapels. The profile of the diagonal ribs both of the nave and side aisles differs from that of the shaft; the former having hollow chamfers and edge-beads, while the latter are plain circular; so that their impost is not strictly that which I have called a banded impost.

Plate VII.

Part of the nave and south transept of the church of the Frari at Venice; an example of an Italian Gothic church with simple cylindrical piers. The nave has the pilaster-like shafts and transverse ribs, and the triforium and the clerestory string are wanting as in the former case, but the transepts appear to be the work of a different hand, from the multiplicity of mouldings upon the vaulting ribs, and the Gothic form of the arch which opens into the side aisles. Both this arch and the vaulting ribs have genuine banded imposts, for the section of each rib precisely resembles that of its shaft. The bases and pedestals are of wood, and conceal the real ones; the pier arches are bordered with the universal Venetian dentil. (Pl. viii. Fig. 40.)

Plate VIII.

Various Forms of Arches. Fig. 1. Management of trefoil in its first introduction, the lower foils being made complete instead of being continuous with the sides of the arch, as in Fig. 4. Fig. 1. occurs in many German examples, and in the triforium of Valence, in France. (Pl. iv. Fig. 4). This is the Saracen mode of treating foiled arches, and they also gave them sub-shafts, as in the last example.

Fig. 2. The Arabian ogee with its small point, from the west front of S. Marc at Venice.

Fig. 3. An elliptical arch nearly approaching the pointed form, which is very much used in S. Marc, Venice, and is erroneously drawn as a pointed arch in the engravings of Cicognara's great work, and elsewhere; in fact there is no pointed arch in S. Marc.

Figs. 5, 6, 7. Different ways of stilting a circular arch, (page 29). Fig. 5. has vertical stilts; Fig. 6. has the curve itself continued, this is the Moorish form of the horseshoe; Fig. 7. has straight stilts inclined inwards, this is the common horseshoe of the Romanesque period, and is not, I believe, used by the Saracens.

Fig. 8. A multifoil arch, which frequently occurs in Early German examples.

Fig. 9. A multifoil arch with blunted points, from the triforium of La Charité sur Loire.

Fig. 10. Occurs in the Early English, and may be described as a trefoil with a square central foil.

Figs. 11—24. Canopies. Figs. 11. and 12. Italian Gothic canopy-arches; the first from Orsan Michele at Florence, the second from the Porta della Carta at Venice. (Vide page 123). Figs. 13, 14, 15, 16, 17, 19, 20. Canopies and door-archways of frequent occurrence in the Flamboyant style of France. Fig. 18. A Gothic canopy and arch

to contrast with the Flamboyant specimens 19 and 20. Figs. 23, 22, 21. A series to shew the gradual rise in pitch of the canopy, from the Romanesque porch to the complete Gothic, in which the upright sides disappear and the canopy becomes a tangent to the arch at its impost. Fig. 24. An Italian Gothic canopy, from the Cathedral at Florence.

Figs. 25. and 26. Favorite forms of pannels in the Italian Gothic, which may be described as multifoils, with the foils alternately round and angular.

Figs. 27. and 28. To shew the difference between a circular quatrefoil and a quatrefoliated circle, (page 45).

Fig. 29. A characteristic pair of compartments of Flowing tracery, in the complete Gothic, (page 61). Fig. 30. The characteristic compartment of Flamboyant tracery, (page 61). Fig. 31. Circle unsymmetrically filled with tracery. This and similar designs often occupy the centre of Flamboyant and German tracery work.

Figs. 32—39. CAPITALS. Some of the happiest efforts of the Gothic architects are to be found in the capitals of their shafts; and I cannot claim pre-eminence for the Italian artists in this respect. The greater part of their capitals belong to the class of *Blocks*, in which no foliage is employed, and the capital is a mere block of stone cut into any simple form that will serve to make a transition from the circular shaft to the square abacus.

The simplest transition of this kind is shewn in Fig. 34., from the crypt of the church of the Eleven Thousand Virgins at Spoleto. Fig. 35. from S. Marc, Venice, has its surfaces covered with Mosaic. Fig. 36. from the crypt of Fiesole, is equally simple. Fig. 37. possesses considerable elegance, and is common in the Veronese churches; is used in the compound piers of S. Zeno with a broader proportion, and having the pointed chamfer slightly ribbed in the centre so as to convert it into a plain leaf. (Vide also Pl. IX. Fig. 9.)

Fig. 38. from the round church of the group of S. Stefano, Bologna, is another simple specimen; and Fig. 39. from the crypt of Fiesole, has a very Saracenic appearance, derived from the hanging pendants of the angles. Besides these, of which many other specimens may be found in the Early Romanesque periods, Cushion capitals* are not unusual, but they are somewhat differently decorated from the Norman ones. For example, Fig. 33. from S. Corona, Vicenza, has small volutes at the angles.

* Cushion capitals, the name given by the Author of the Architectural Notes on German Churches to the common Norman capital. Pl. IX. Fig. 5.

In the Venetian territory, capitals of this kind are found which have the faces and edges rounded off, as in Pl. IV. Fig. 9; and in S. Marc there are some covered with shallow foliage.

Fig. 32., is not unusual in Lombard churches; it is a mere swelled surface of stone cut into shallow foliage, matwork or rude figures of animals or men. The capitals of their isolated shafts are generally either genuine antiques, or rude imitations of Corinthian, Composite, or Ionic. Those of the Italian Gothic are singularly stiff and awkward; they consist of two rows of raffled leaves bound round the pier. Some idea of their effect may be formed from Pl. III. Fig. 13.; Pl. VI.; Pl. XIII. and Pl. XV. Fig. 6. Sometimes a narrow band of foliage is used not very different from those of the other Gothic builders, as in Pl. VII.

Perhaps the best capitals are to be found in the doorways; where the impost is always furnished with a rich band of leaves and flowers, following the profile of the shafts and arch-edges, and forming capitals in passing over the most prominent portions.

CHARACTERISTIC ORNAMENTS. Fig. 40., is a piece of an ornament which is so great a favorite with the Venetians, that it appears everywhere upon their buildings amongst the mouldings, and that from the earliest ages to the latest, from the front of S. Marc to the Palazzi Foscari and Pisani. In my plates it may be found bordering the pier-arches in Pl. VII.; also in Pl. XI. Figs. 2. and 3.; Pl. XII. Figs. 7. and 8.; and Pl. XV. Fig. 7.; in short, in all the Venetian examples. It is the most universal ornament in its own district that ever I met with, and is very rarely to be found out of it.

It consists of a fillet with its sides cut alternately into notches, which reach the middle of the face and produce the effect of a double row of dentils: I have called it the Venetian dentil.

While on the subject of characteristic ornaments, I may add that the Early English dog-tooth is found in Italy in many cases. Thus in the south door of the Town-hall at Perugia, it is used and set in a hollow exactly as in the Early English specimens; I have also found it in a door opposite the great inn at Terni; in the front of S. Fermo at Verona it appears as an edge-moulding, (Pl. IX. Fig. 9.), and it also occurs on the cornice of a house in Vicenza.

Strings of unpierced pyramids are very common, as for example, on the abacus of the piers in Pl. VII. In the ancient brick-work of the Venetian district, a string of bricks set horizontally angle-wise is very prevalent; it produces the effect of a zigzag ornament; it appears in Pl. IV. Fig. 9. bordering the arch, and also running

under the cornice. The characteristic of the Italian Gothic is a string of shallow small dentils, but these are also occasionally to be found in earlier specimens; they are seen in Pl. IV. Fig. 9. crowning the cornice; in Pl. IX. Fig. 15., in Pl. XI. Fig. 1., bordering the small arches of the light-heads; in the circles of Pl. XIII.; and are also used in Pl. XIV. Fig. 5.

PLATE IX.

A set of examples to explain the nature and treatment of FOLIATION and the probable mode of its invention. Vide page 40. Fig. 1. Arch from S. M. della Spina, Pisa. Fig. 2. from S. Niccola, Pisa. Figs. 3, 4, north-west tower of Mentz Cathedral. Figs. 5, 6. S. Gereon, Cologne. Fig. 7. tower of S. Christopher, Mentz. Fig. 8. triforium of the Cathedral at Nevers in France. Fig. 9. front of S. Fermo Maggiore, Verona. Figs. 10, 11. Complete Gothic Foliation. Fig. 12. German After Gothic Foliation, from the *Goldene Dach* at Innspruck.

Figs. 13—18. Italian Foliation. Fig. 13. in terracotta from the Palazzo Bonsignore at Siena. Fig. 14. from S. Antonio vecchio, Verona. Fig. 15. from a canopy in the Cathedral at Naples. Fig. 16. from the front of S. Caterina, Pisa. Fig. 17. An Angiovine window with foliation of two orders from Naples. Fig. 18. A square-headed pannel bifoliated, from the west door of the Frari, Venice; this rarely occurs.

PLATE X.

To explain the probable history of TRACERY and the system of its mouldings. Vide page 49. Fig. 1. Part of a Roman brick church tower. Fig. 2. from the front of S. Michele, Pavia. Fig. 3. from the front of S. Zeno, Verona. Fig. 4. Triforium of Modena. Fig. 5. from the front of S. Stefano, Genoa. Fig. 6. from the south side, Modena Cathedral. Figs. 7, 8. from the Triforium, Lyons Cathedral: *A* and *B* the respective profiles of the mouldings. Fig. 9. from the Clerestory of S. Marc, Rome. Figs. 10, 11. from S. Gereon, Cologne. Fig. 12. from S. Andreas, Cologne.

PLATES XI. XII. XIII.—WINDOWS.

PLATE XI. ITALIAN TRACERY. Fig. 1. from the unfinished nave of Siena. (p. 62.) Fig. 2. from the north transept S. Antonio, Padua. (p. 57.) Fig. 3. from the front of Madonna dell' Orto, Venice. (p. 63.) Fig. 4. from the south transept of S. Giovanni and Paolo, Venice. (p. 57.). Fig. 5. from Modena Cathedral. (p. 60.) Fig. 6.

part of a magnificent window at the east end of S. Domenico, Perugia. (p. 58.) Fig. 7. from the side aisles of the Cathedral Perugia. (p. 63.) Of the profiles, *ABC* belongs to Fig. 2., *DE* to Fig. 3., and *F* to Fig. 6. The profile of the tracery bars of Fig. 4., are similar to *E*, with the addition of edge beads below the hollow chamfers; and the mouldings of the window side not very different from *D*. The dotted lines serve to separate the orders of mouldings, which are marked in each 1, 2, 3; and they shew how the successive classes of mullions arise from the same system.

PLATE XII. Figs. 1, 2, 3. German After Gothic Tracery from the Cathedral at Augsburg. Fig. 1. Stump Tracery. (p. 61.) Fig. 2. Exuberant Foliation. (p. 47.) Fig. 3. Unstable Tracery. (p. 61.) Fig. 4. A Flamboyant window from the west end of the Cathedral at Louvain, to explain the subordination of mouldings in tracery. (p. 56.) The left hand half of this figure is drawn complete; in the right hand half the tracery is represented in outline only. *A, B, C, D* below are the sections of the different *classes* of mullions and tracery bars, produced by the superposition of the successive *orders* of mouldings, whose profiles are shewn on a larger scale at Fig. 9.; the letters *a, b, c, d*, placed on different parts of the tracery, shew where the sections *A, B, C, D*, respectively, are taken; and this is still further elucidated by indicating the lowest class *D* by dotted lines, the next *C* by single lines, and the next *B* by double lines.

Fig. 5. A piece of Flamboyant work from the triforium of S. Nizier at Lyons. (p. 61.). Fig. 6. a window from the tower of S. Giovanni Maggiore at Naples, with a dripstone having *external foliation;* this also occurs at S. Chiara.

Fig. 7. A window in the main street of Verona opposite SS. Apostoli. (p. 54.). Fig. 8. A window of a kind very common in Venice and its territory, (this was copied from the Vescovado at Verona); *X* is the section of the mouldings at *x*, *Y* at *y*, and *Z* at *z*, respectively. The windows of a great number of the smaller houses in Venice are either of this pattern or of a similar one, in which the arches are ogee trefoliated, instead of trefoil ogees, as in this. They consist of one, two, three or more lights, the profile of the mouldings is always the same, and in the foliated examples the foliating space is square-edged, and the mouldings *X* run round the arch. The arches all rest on bearing-shafts and spring at each end from pilasters, as in this example; but sometimes the Venetian dentil instead of following the arch forms a square canopy, as in Fig. 7. Such tracery as that of Fig. 7. is rare, but a heavy kind of tracery is made use of in the Ducal palace, the Palazzo Foscari,

and some others, which have been engraved in Cicognaras' great work. It derives a peculiar character from being included in a square-headed opening. The profile in the Ducal palace tracery is that of *E*. Pl. XI.

Fig. 9. belongs to Fig. 4., and has been already explained.

PLATE XIII. Fig. 1. Part of a window in Orsan Michele at Florence, to explain the system of mouldings in Italian Gothic tracery and its general character. (p. 59.); the right hand half of the figure is finished; the left hand in outline only, to receive the letters of reference. Fig. 2. is a section along the dotted line *mn*, to shew the mouldings, which are not symmetrically disposed as in the complete Gothic, but are differently managed in each pannel. In this section the mouldings are drawn on a much larger scale than the pannels; or rather, as if each pannel had been cut at its narrow end: this can lead to no ambiguity, because the proportional breadth of the mouldings is shewn in the finished half of the figure.

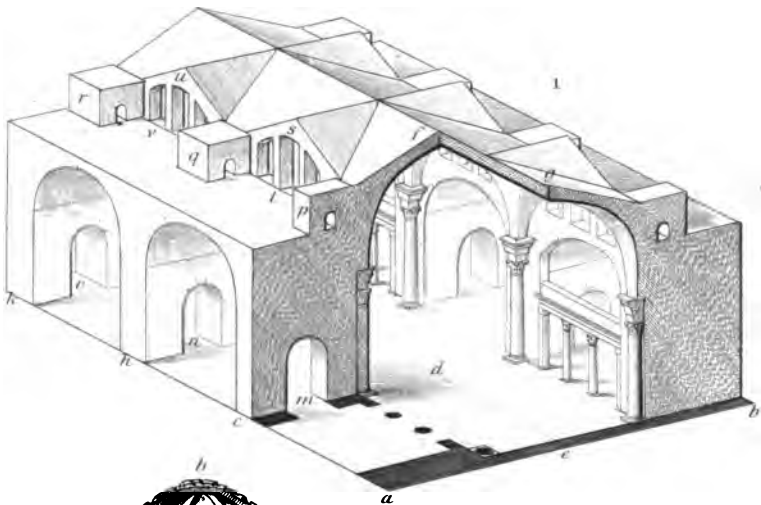
The letters in Fig. 2. apply to the same pannels as in Fig. 1. respectively. In *DE* it will be seen that there are three orders of mouldings, marked 1, 2, 3.

PLATES XIV. XV.

ITALIAN DOORWAYS. (Vide page 113). Fig. 1. from S. Pietro Martire at Verona. Fig. 2. from S. M. in Forisportam at Lucca. Fig. 3. from a house at Naples. Fig. 4. from S. Chiara at Naples. Fig. 5. from the interior of the south transept of S. Marc at Venice. Fig. 6. from S. Carlo at Florence. Fig. 7. from S. Stefano at Venice. Fig. 8. from S. Giacomo at Bologna. The remaining figures are the sections of the mouldings and plans of the piers of these doorways; they are each marked with capital letters, and taken at those places in the figures which are marked with the corresponding letters in italics. *A* belongs to Fig. 3., *BC* to Fig. 7., *FG* to the canopy of Fig. 7., *HI* to Fig. 5., *KL* to Fig. 1., *MN* to Fig. 6., *OP* to Fig. 8. *Q* is a section of the door of S. Giovanni at Lucca, (vide page 118), and *R* is an edge-moulding, (vide page 119).

The mouldings of Fig. 7. are very highly carved; thus in Fig. *BC*, *e* has the Venetian Dentil, and a lesser string of half dentils by the side of it, *f* is covered with rich leaves spiring upwards and having flowers interposed, *g* a flat surface decorated with an Arabesque scroll, *h* a spiral or screw formed of alternate hollows and rounds with fillets between, *i* a spiral formed of rounds only so as to resemble a rope, *k* has rich leaves.

FG is divided into four parts by the dotted lines; of these, *l* follows the outline of the canopy and consists of a band of leaves and a Venetian Dentil band, *m* is a short piece of moulding which merely runs under the horizontal returns of the canopy and mitres over the corbels of the turrets, *n* follows the same course and also runs across the transom of the doorway, *G* is identical with *e* in Fig. *BC*, and is introduced to shew the connection of the two profiles.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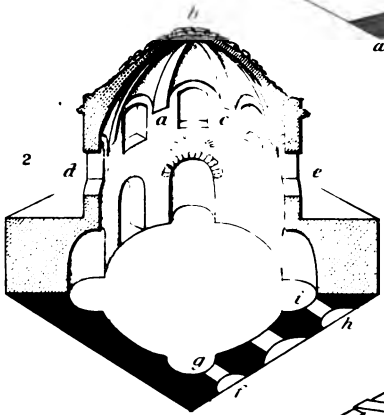
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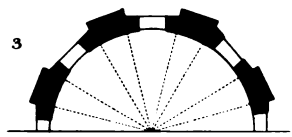
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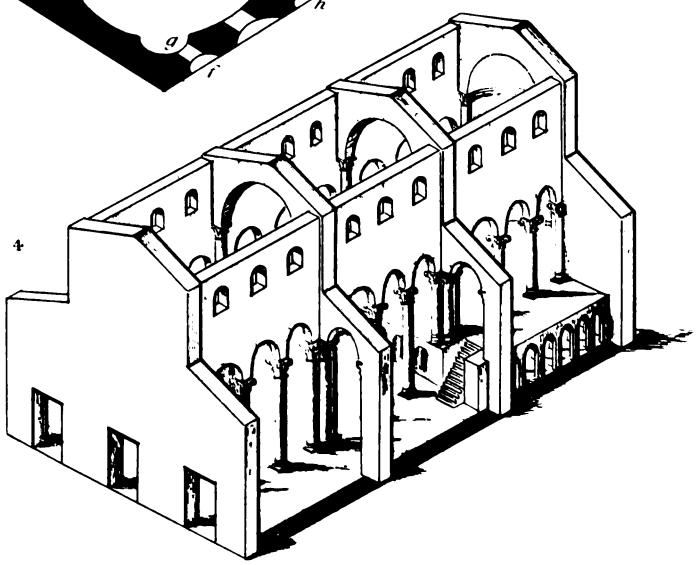
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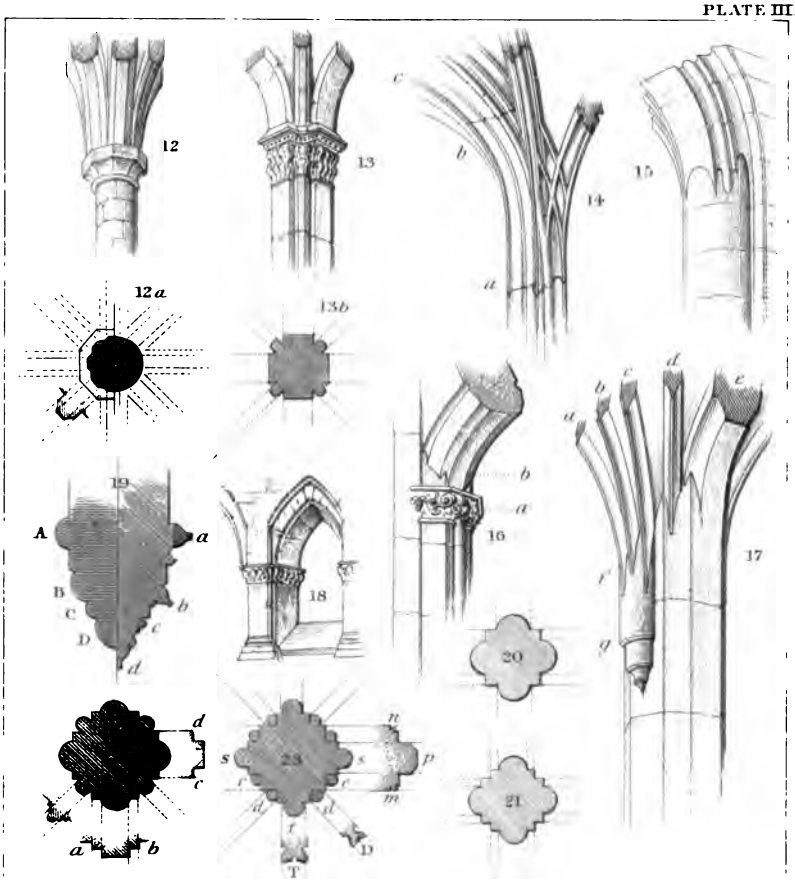
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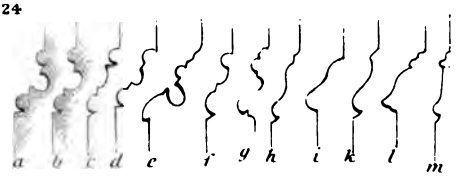
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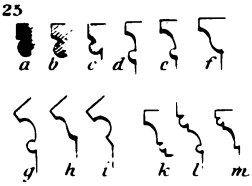
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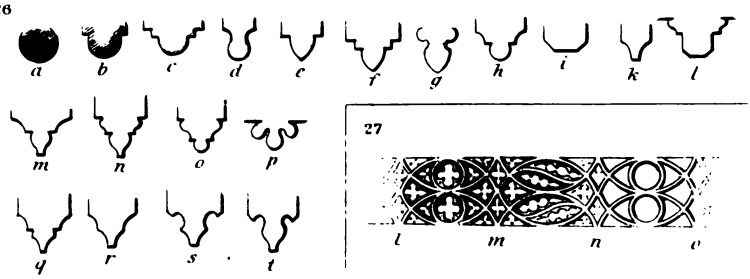
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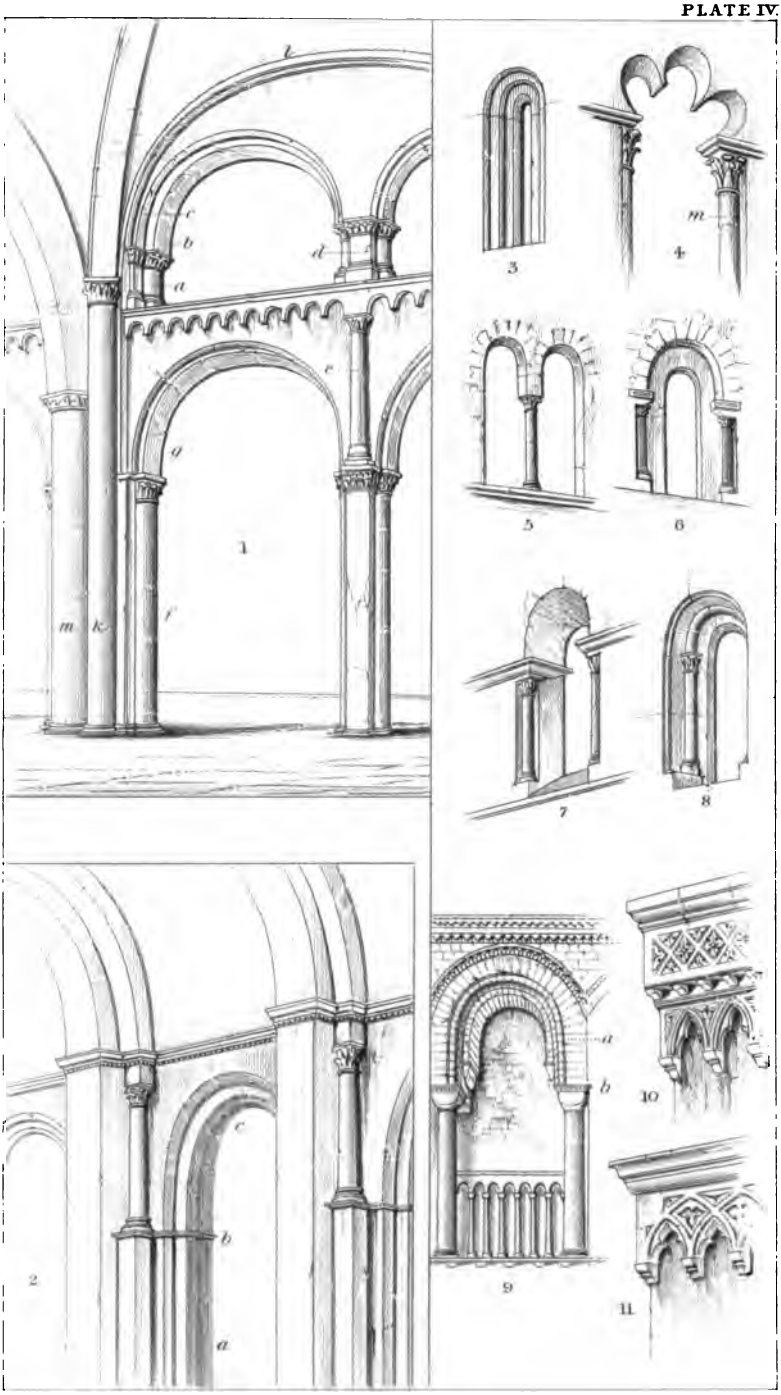
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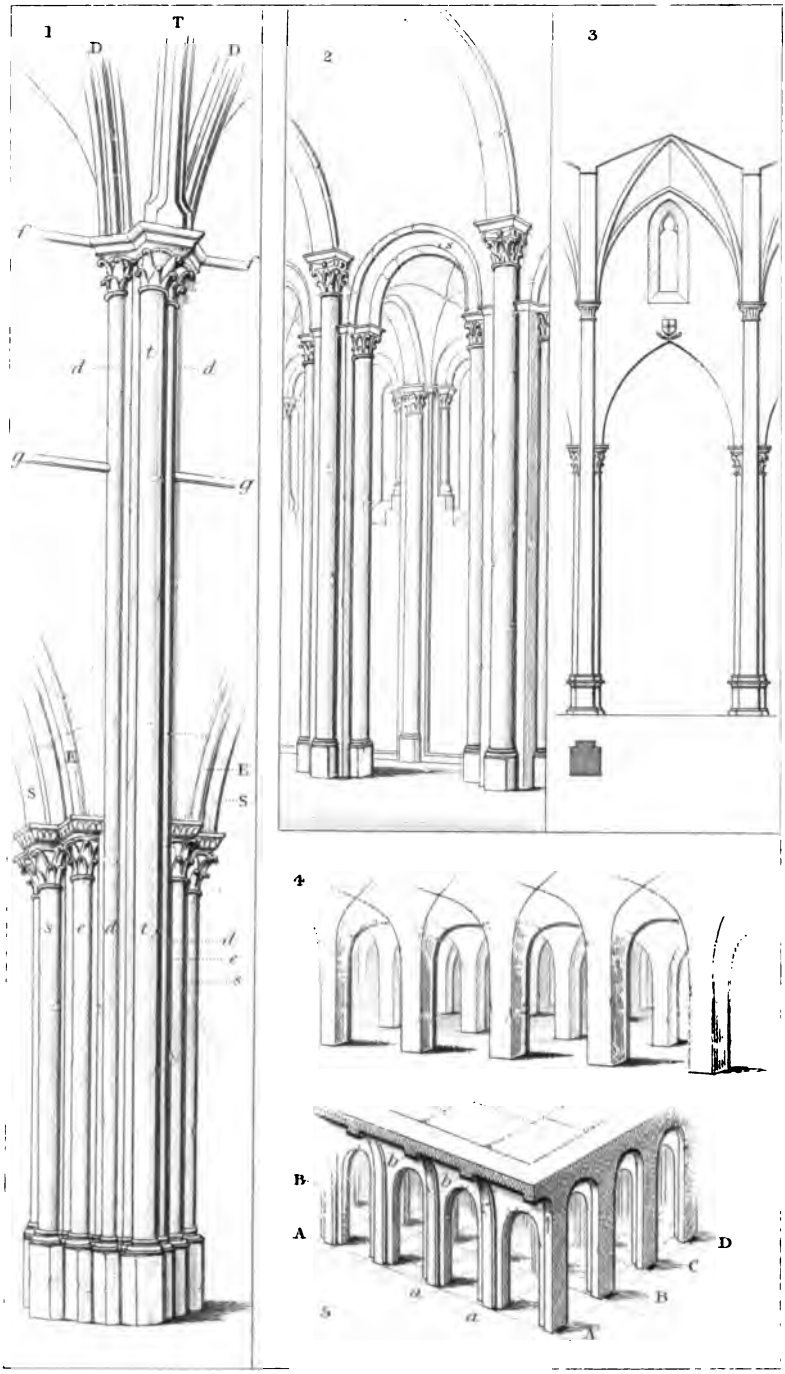
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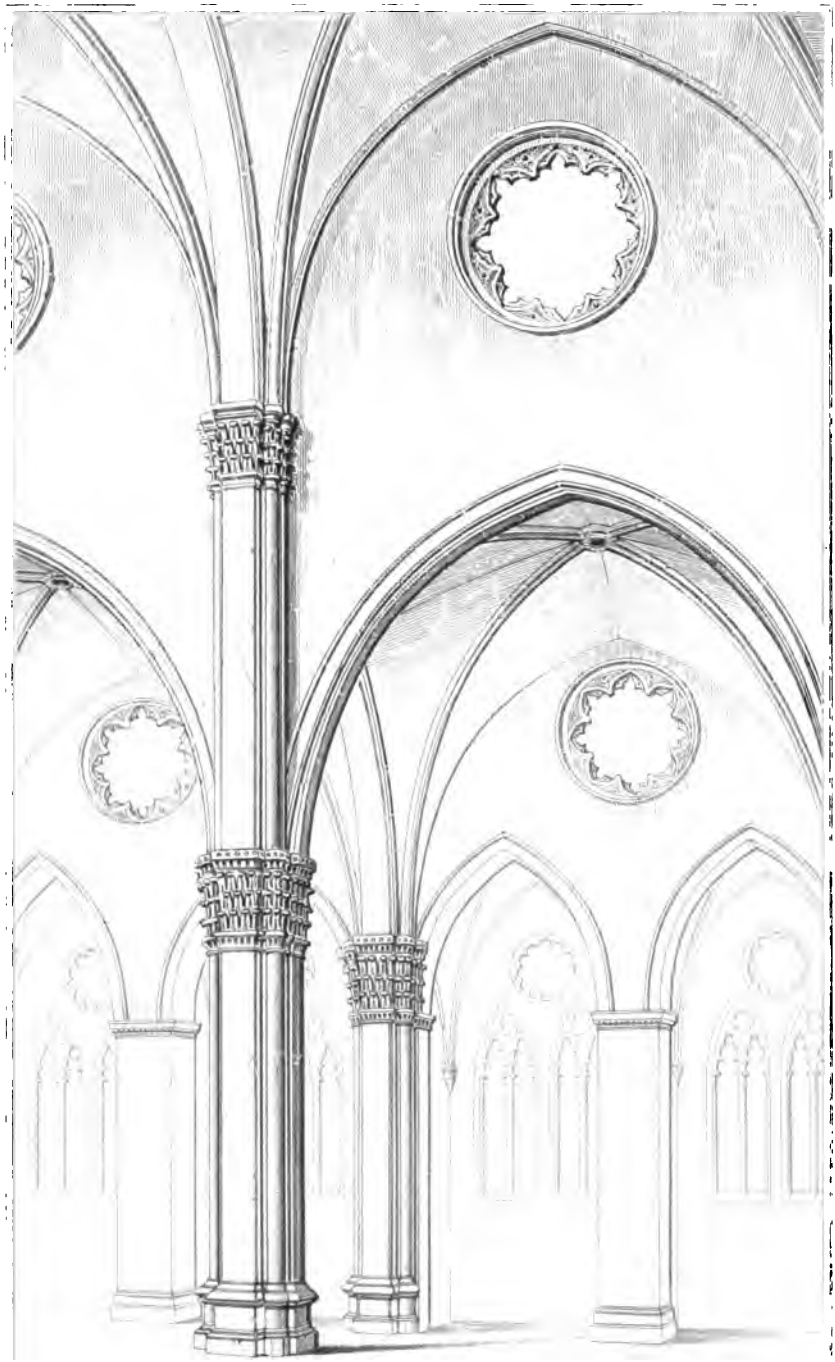

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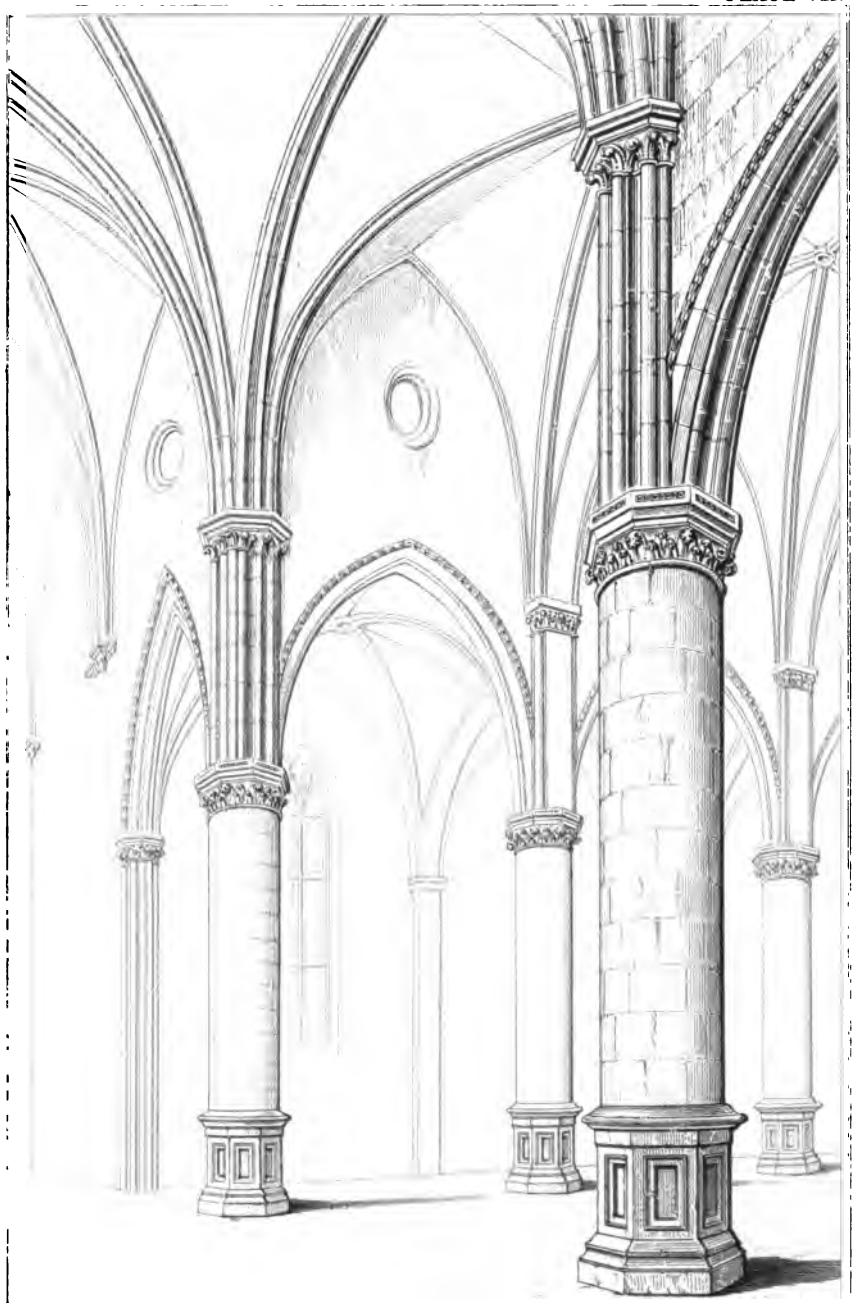

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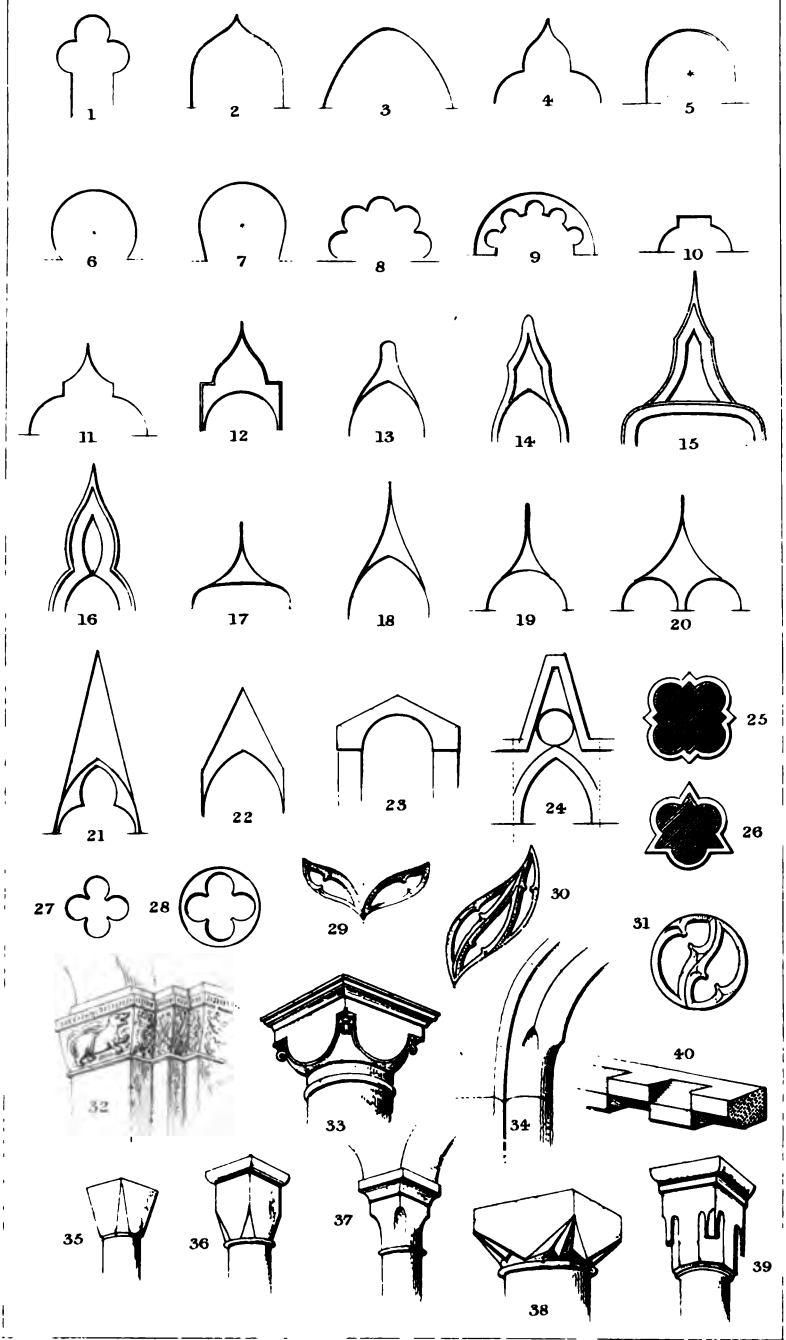
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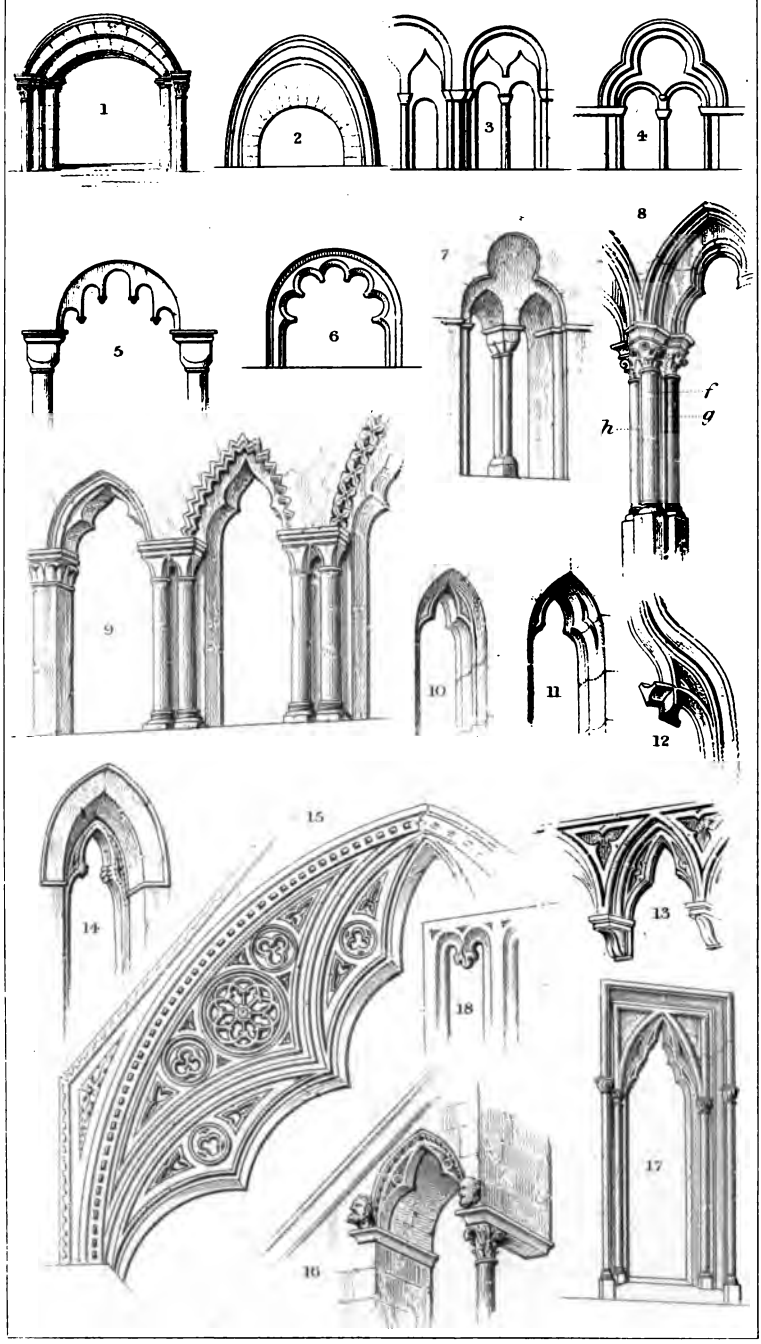
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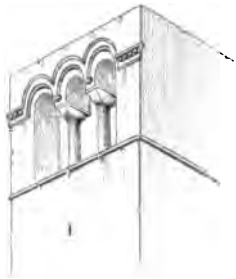
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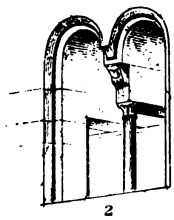
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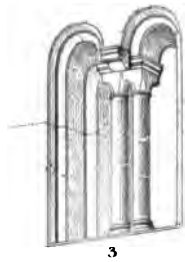
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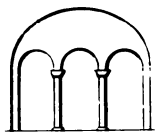
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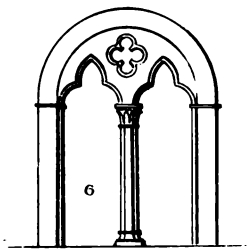
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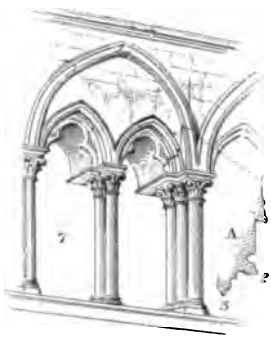


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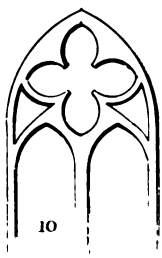
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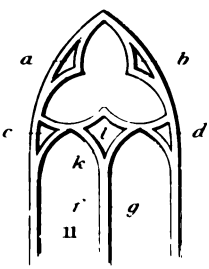

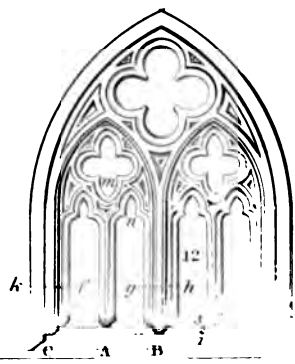

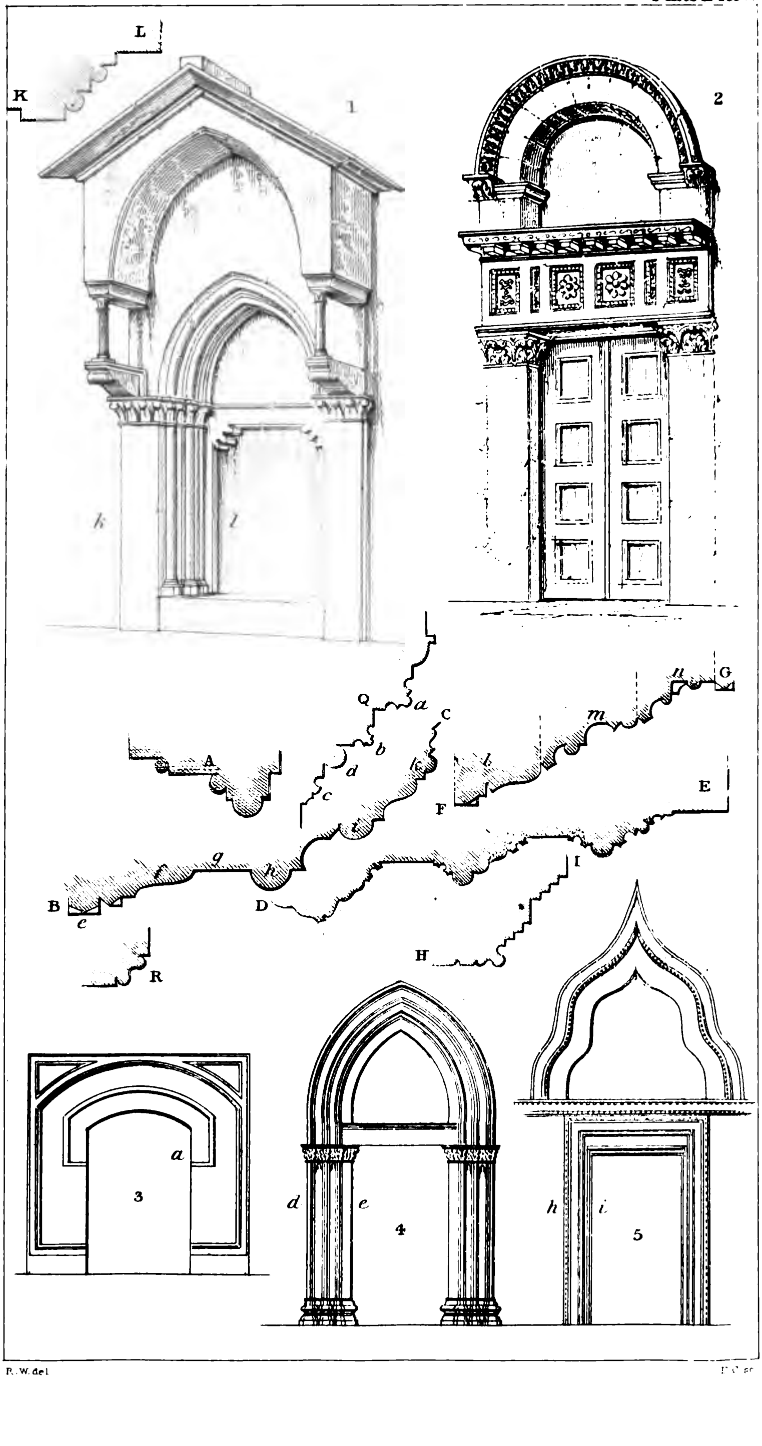

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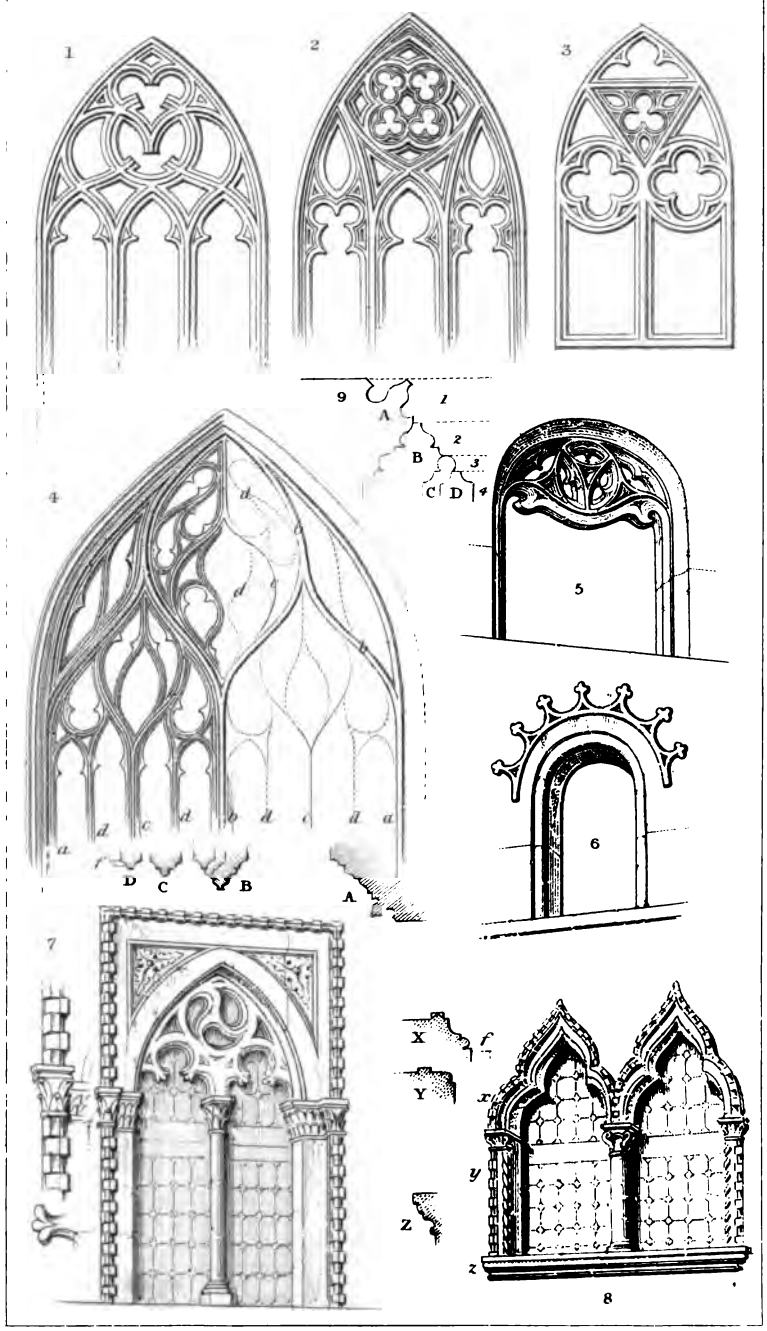
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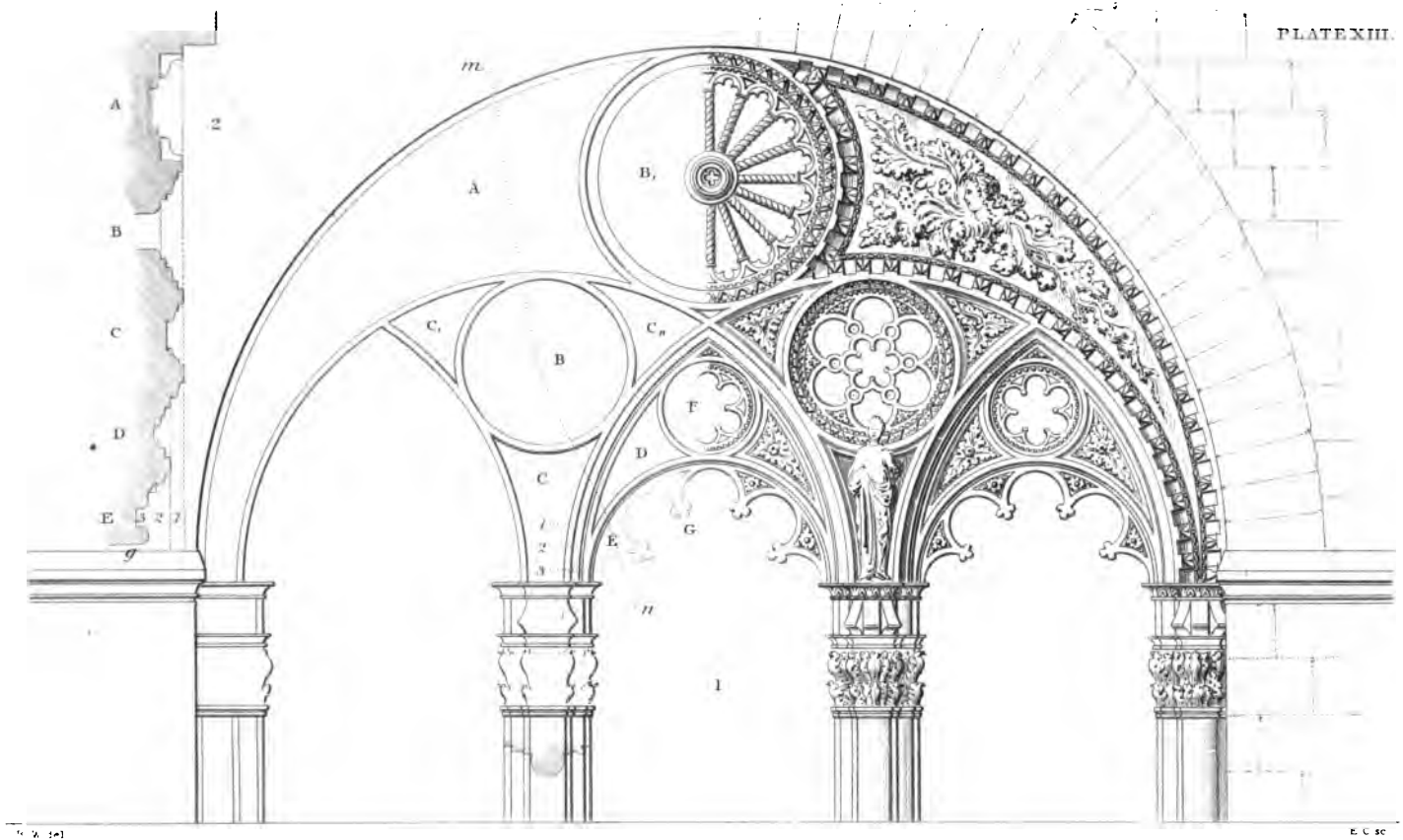
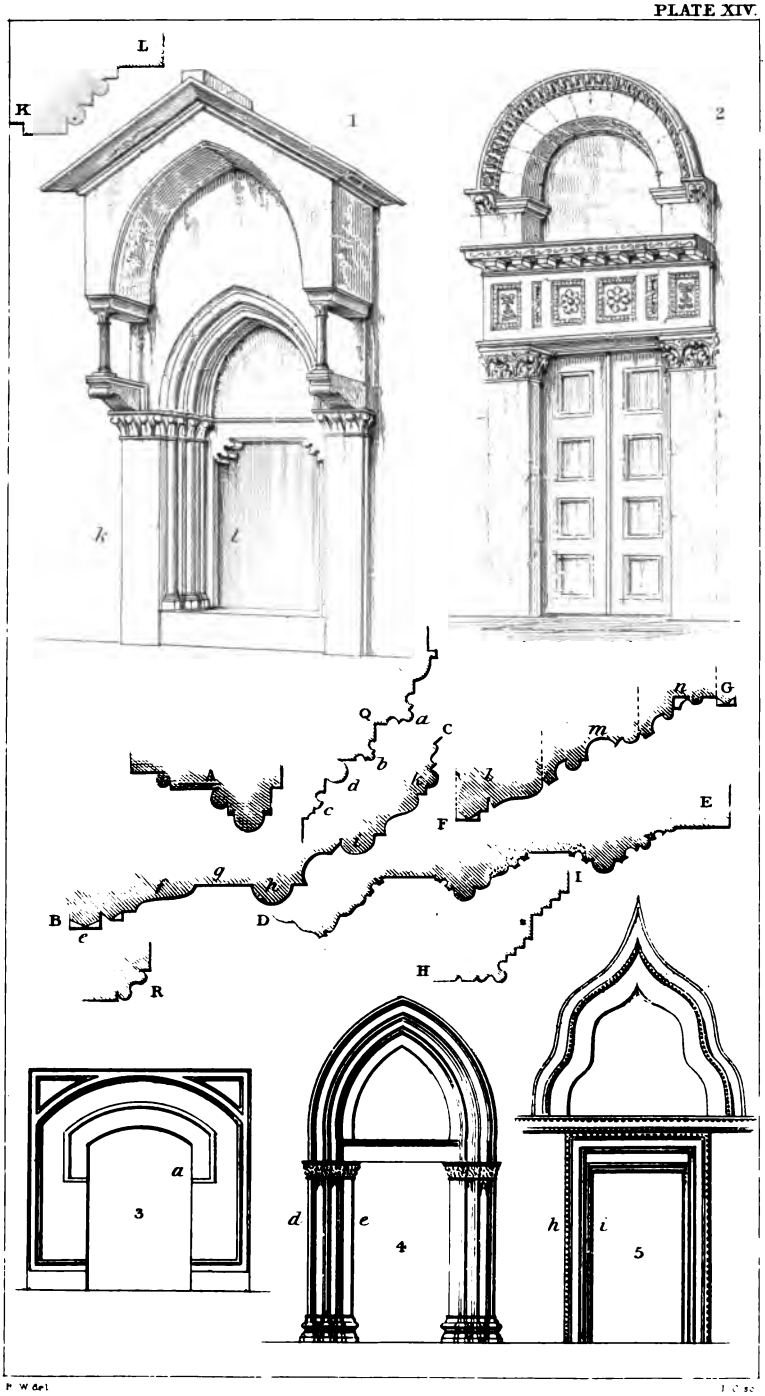


TRACERY FROM ORSAN MICHELE, FLORENCE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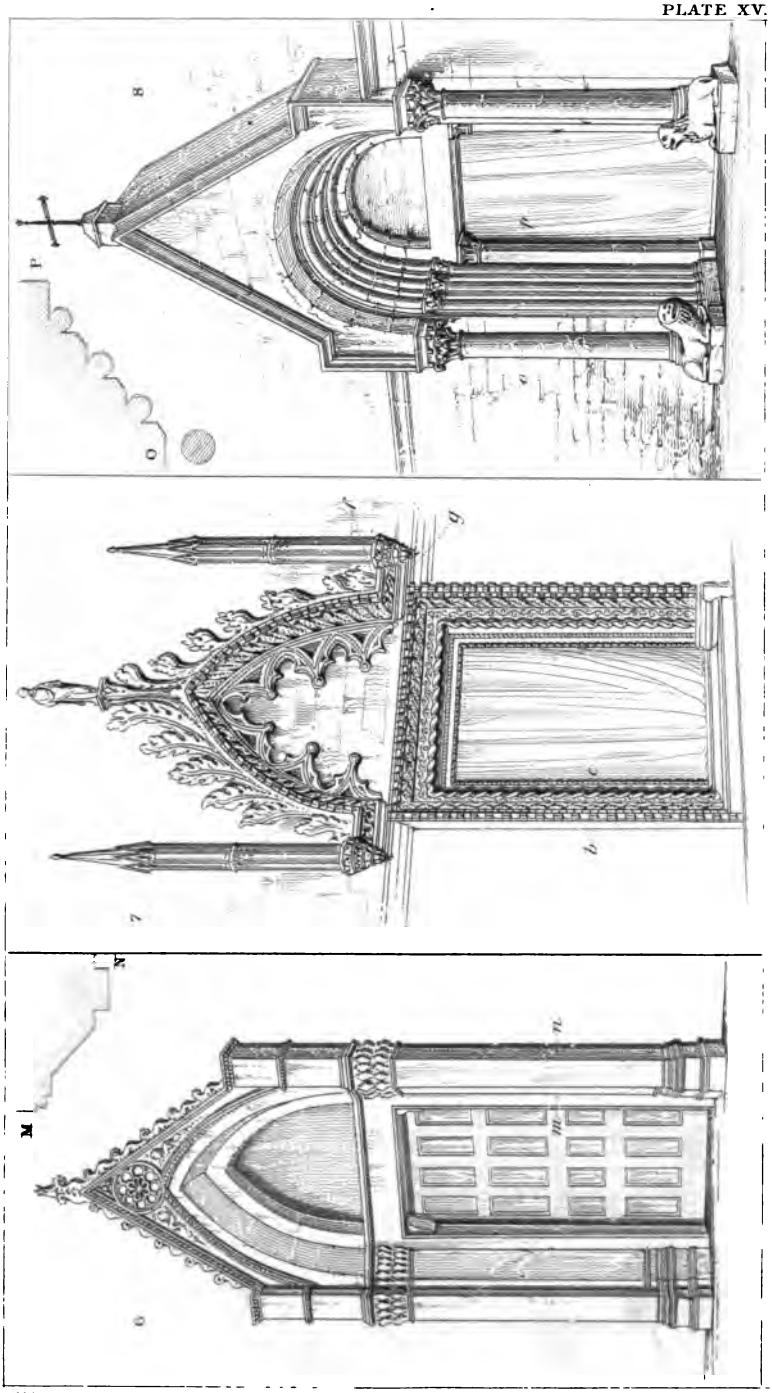
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